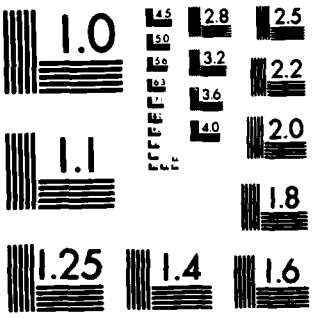
AD-A170 953 EXPLORATORY STUDY OF THE POTENTIAL EFFECTS OF EXPOSURE TO SONIC BOOM ON H..(U) SYSTEMS RESEARCH LABS INC DAYTON OH H ANTON-GUIRGIS ET AL. JUN 86 1/2

UNCLASSIFIED AAMRL-TR-86-020-VOL-2 F33615-81-C-0500 F/G 6/19 NL



AAMRL-TR-86-020
Volume 2

EXPLORATORY STUDY OF THE POTENTIAL EFFECTS OF EXPOSURE TO SONIC BOOM ON HUMAN HEALTH

Volume 2. Epidemiological Study

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JUNE 1986

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AAMRL-TR-86-020, Vol. 2

This report has been reviewed by the Office of Public Affairs (PA) and is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nations.

This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER

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SECURITY CLASSIFICATION OF THIS PAGE AD-A170 953

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION: UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT: Approved for public release; distribution unlimited
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S): WR 86-1	5. MONITORING ORGANIZATION REPORT NUMBER(S): AAMRL-TR-86-020, Vol. 2
6a. NAME OF PERFORMING ORGANIZATION: University of California, Irvine; 6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION: AAMRL/BBE
6c. ADDRESS (City, State and ZIP Code): Dept of Community & Environmental Medicine Irvine, CA 92717	7b. ADDRESS (City, State and ZIP Code): Wright-Patterson AFB, OH 45433-6573
8a. NAME OF FUNDING/SPONSORING ORGANIZATION: AAMRL; 8b. OFFICE SYMBOL (If applicable): BBE	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER: F33615-81-C-0500
8c. ADDRESS (City, State and ZIP Code): Wright-Patterson AFB, OH 45433-6573	10. SOURCE OF FUNDING NOS.

PROGRAM ELEMENT NO	PROJECT NO.	TASK NO.	WORK UNIT NO
62202F	7231	34	07

11. TITLE (Include Security Classification): EXPLORATORY STUDY OF THE POTENTIAL EFFECTS OF EXPOSURE TO SONIC BOOM ON HUMAN HEALTH Vol 2: ~~Health Effects of Sonic Boom~~

12. PERSONAL AUTHOR(S): H. Anton-Guirgis, B. D. Culver, S. Wang, T. H. Taylor

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Yr., Mo., Day)	15. PAGE COUNT
Final	FROM Nov 84 TO May 86	June 1986	172

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB. GR.	Noise Sonic Boom Community Noise Exposure
06	19		

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

A study has been carried out to investigate possible human health effects caused by exposure of people to sonic boom. The subjects of the study were the residents of the State of Nevada. This state was selected for the study because supersonic military flight operations have been carried out in Nevada, primarily within the boundaries of the Tactical Fighter Weapons Center (TFWC) Range Complex near Las Vegas, longer than in any other area within the United States. This volume presents the results of an epidemiological study to search for any health effects.

The health effects study was built entirely on a statewide epidemiologic evaluation of mortality for Nevada residents from 1968 to 1983, supplemented by hospital discharge morbidity data. The results of the statewide study revealed no convincing evidence to prove or disprove any relationship between exposure to sonic boom and adverse health phenomena. Statewide, age-adjusted mortality in Nevada is unremarkable compared to

(cont'd)

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION	
UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS ☐	UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL: Charles S. Harris	22b. TELEPHONE NUMBER (Include Area Code): (513) 255-3604	22c. OFFICE SYMBOL: AAMRL/BBE

DD FORM 1473, 83 APR EDITION OF 1 JAN 73 IS OBSOLETE.

SECURITY CLASSIFICATION OF THIS PAGE

national figures. Crude death rates did vary directly with exposure to sonic booms but this relation disappeared when mortality was age-adjusted. Analyses of time trends and bivariate linear regressions failed to yield convincing associations between sonic boom exposure and age-adjusted mortality. Access to a population of weapons-range workers and to their health records, which was an additional key component of the research study, was not granted.

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1.0 INTRODUCTION

Because of continued concern on the part of the scientific community and the general public that repetitive exposure to sonic boom may lead to chronic physiological abnormality,[1, 2] a major effort has been made to identify an excess of abnormalities in a population exposed to frequent sonic booms. To do this, traditional epidemiological methods have been employed. This volume reports the results of this epidemiological study carried out for residents of the State of Nevada. The companion volume* reports the evaluation of the sonic boom environment in the study area.

Experiments on the causal relationships between discrete loud noises and health status have been performed, mostly using animal subjects. The set of outcomes points to the potential of cardiovascular and behavioral/affective measures in evaluating the impact of sonic booms on humans. In addition, some of these studies suggest that immune-system status and birth defects and/or developmental disorders will be of interest as a function of exposure to sonic booms.

Epidemiological studies and some experiments have assessed relationships between chronic exposure to loud, workplace noise and a variety of health measures.[3, 4] Generally, the health measures employed can be cast into two groups: indications of cardiovascular disease, and indications of behavioral or affective change. The quality of these works varies appreciably. However, there is some convergence of results to the effect that blood pressure is very likely responsive to chronic, loud noise. Components of the electrocardiogram may also be responsive to chronic, loud noise (but often in ways that are clinically ambiguous.)[5, 6]

While sonic booms are not continuous in character, there is some indication that discrete, loud noise is functionally equivalent to continuous, loud noise in terms of health consequences.[7]

Independent of any findings regarding sonic booms and hearing loss, there are many unresolved questions regarding sonic boom exposure and nonauditory health effects. A large body of research attempts to document relations between chronic exposure to loud, continuous noise and health status.[8, 9] These studies

*Wyle Research Report WR 86-1, "Study of the Effects of Exposure to Sonic Booms on Human Health – Volume I, Sonic Boom Environment," March 1986.

demonstrate clearly that man responds to noise with a variety of transient physiological changes. However, there is no reliable evidence in man that these transient changes become fixed or lead to disease.

The Overall Approach

The primary intent of the study was to develop a methodology to enable us to uncover a possible link of increased frequency of health effects (particularly cardiovascular) with residency in the areas with high sonic boom exposure over the last 16 years compared with low exposure areas. The data utilized to test this association was generated from health and demographic records from health departments, hospital and clinical records, as well as the Bureau of Vital Statistics (see Section 2.0).

The concept underlying our study was to search as diligently as possible within program resource constraints for measurable diseases in the test population which are most likely to result from sonic boom exposure.

The Study Area

The State of Nevada was selected for this study since the sonic boom exposure in this State, especially within the Tactical Fighter Weapons Center (TFWC) Range Complex near Nellis Air Force Base, was believed to be greater than for any other inhabited area in the United States. Nevada had a population of about 920,000 people in 1983; 82 percent were concentrated in Clark (Las Vegas) County and Washoe (Reno) County with most of the remainder spread out over small town, or rural, sparsely-populated areas. The TFWC Range Complex in the southern part of the State lies primarily within Nye and Lincoln Counties which had a total population of approximately 20,000 in 1983. The median age of all residents in Nevada in 1983 was about 30 years and, in Nye and Lincoln Counties, about 31.

2.0 METHOD

The basic data analysis process involved the development of age-corrected mortality and morbidity (disease) data by geographic area (townships and counties within Nevada) for a time period coincident with, or greater than, the time period (1969-1983) for which sonic boom exposure data were available. These health data for Nevada were first compared to national norms to see if any Nevada-specific patterns emerged and then they were correlated with the sonic boom exposure data to probe for any cause-effect relationships.

2.1 Data Collection

Computer tapes were purchased from the Nevada State Health Department, including data on ambulance run reports, abortion, deaths, divorces, births, Women-Infant-and-Children (WIC) Nutrition Clients, and Census tapes (Appendix 1, Tables 1 and 2). All of these tapes were nonlabeled and written in ASCII. In order to detect possible defects in the tapes, each of these tapes was tested by copying small portions of each file to the Digital Equipment Co. (VAX) computer facility at UCI and examining the content.

The population tape (DB1373 CHOO) was received with an explanation of file contents. A data key was constructed which denoted the variables, their positions, and code was constructed (Appendix 1, Table 3). The information provided in this file included year, county, sex/race, age group, and population within that age group.

The file layouts (Appendix 1, Tables 4 and 5), computer printouts (Appendix 1, Tables 6 and 7) of master copies, the keypunch instructions, and the codes were documented for both the birth and death files. In both the birth and death files, confidential information (i.e., name, social security number, address) was not released by the Nevada State Health Department. Code books which show the variables provided on these tapes are in Appendix 1, Tables 8 and 9.

Birth, Death, and Population files were loaded onto the VAX at UCI. The Population tape consisted of two files: The first file contained data records for the years 1964 to 1983 based upon the 1980 Census; the second file contained data records for the years 1964 to 1980 based upon the 1970 Census. The final population file retained in both computer systems contains annual information from 1964 to 1983. The data of 1964 to 1975 were estimates from the 1970 Census and

the data of 1976 to 1983 were estimates from the 1980 Census. (The final analyses utilized only data from 1968 to 1983).

Other sources of population data were Bureau of Census publications, including Number of Inhabitants,[10] Vital Statistics of the U.S.,[11, 12], Age-Adjusted Death Rates for Selected Causes by Color and Sex,[13-16] Estimates of the Population of Counties and Metropolitan Areas,[17-37] Provisional Estimates of the Population of Counties,[38-43] and Estimates of the Population by States.[44-50]

2.2 Editing of Data Using SAS

The data on the tapes of population files and death files were edited using the Statistical Analysis System (SAS) software package on an IBM mainframe 3081 running MVS. SAS is a software package for manipulation and analysis of data. All the tasks were executed by IBM utility or other packaged software under the System Productivity Facility (SPF) or Time Sharing Option (TSO).

The original Population files obtained from Nevada were based on two different Census (1970 and 1980) and had been written on the same tape without a tape label. This created a problem in working on the file. Another problem was that the original record length was 300 bytes which exceeded the maximum limit (256 bytes) that could be freely moved around on the monitor screen. In order to overcome these problems, the raw disk file was rewritten into two short disk files. The first short file contained year, county, sex, race, and numbers of population up to 16 years old; the second short file contained information of year, county, sex, race, and numbers of population from 17 to 85 years old. During the process of creating these two files, the data lines which denoted the information on unknown county/rural areas were dropped; however, the figures on total population were retained from the original source.

The undesired data lines in both shortened population files were then manually deleted through full-screen editing. As both data sets were cleaned, these two files were merged into a partitioned SAS data set by year, county, sex, and race. During the procedures, and before the merge step actually took place, race code was changes to be consistent with both birth and death files. The contents of the revised population files are included in Appendix 1, Table 10.

The editing process for the death file involved screening the data set in a univariate and bivariate manner (Appendix 1, Tables 11 and 12) and changing codes

to obtain consistency across files. The contents of the cleaned death file stored on the disk is shown in Appendix 1, Table 13.

2.3 Variables Used for Data Analyses

Before the variables were selected for final data analysis, some test runs were performed on the death file. These tests were bivariate tabulations done by year of death for each sex and for both sexes together. This information included: (1) race versus birthplace, (2) age versus birthplace, (3) race versus sex, (4) age versus sex, (5) race versus county of occurrence, and (6) age versus county of occurrence. After these computer runs, it was decided that place of residence would be used for the geographic distribution variable rather than place of occurrence. The variables selected for further analysis were as follows:

1. In the population file, year, county, sex, race, and population by age groups.
2. In the death file, age, International Codes of Disease (ICD),[61] disease group, residence county, residence town, race, sex, township, and year. The disease group variable was created from ICD Codes (considering the appropriate ICD edition) (Appendix 2, Table 1), and township was created by pooling across the towns (Appendix 2, Table 2).
3. In the environmental data file, the variables used were type of aircraft, year, township, county, number of events, average peak pressure, average sonic boom carpet area, and the yearly day-night average C-weighted sound level. The reader is referred to Volume I of this report for a complete discussion of the environment data. Briefly, number of events may be thought of as number of sonic booms, and the yearly day-night C-weighted average sound level is the energy produced by sonic booms apportioned over a 24-hour period and then averaged, on an energy basis, over the year and expressed in log units.

2.4 Integration and Reduction of Data

In order to facilitate data processing and improve efficiency in computer use, the edited master SAS data sets for death and population (Appendix 1, Tables 10 and 13) were retrieved from the system. New variables were added, unwanted variables were dropped, block sizes were readjusted according to the new record lengths and, finally, smaller SAS data sets were created for practical use after these preliminary preparations.

2.4.1 Denominator Data

Denominator data refers to the population at risk to develop disease and is required to convert absolute disease rates into normalized values per capita. The original population file including the raw data and the cleaned file retained 36 age categories. A new data set which contained 13 age categories (Appendix 2, Table 3) was created from the old data set. The newly created file was used as an input to create smaller data sets (Appendix 2, Table 4) specific by sex and race. Subsequently, members of the data set which contained only 1 year's information were created. These smaller data sets with only eight variables (described in Appendix 2, Table 4) were written back to the system in a new, partitioned data set. Summations of population by intervals of time 1968-1969, 1970-1974, 1975-1979, 1980-1983) were executed. The inputs to the summation procedures were the yearly SAS data sets; the outputs of the summations were written to a new data set partitioned on the four time intervals.

2.4.2 Mortality Data

The edited data described in Appendix 1, Table 13 was used as an input file to create new variables for a condensed data file. This condensed file contained age, ICD, county of residence, town of residence, race, sex, year, and township. Township is the minor civil division obtained in Nevada, several townships typically making up a county. The township variable was created according to the coding scheme described in Appendix 2, Table 2. Again, this newly created condensed file was used as an input to create a file containing the variable disease category according to the ICD codes (considering the appropriate edition of ICD) (Appendix 2, Table 1). After the procedures for denominator data, described above, four more data sets which reflected time periods of 1964-1969, 1970-1974, 1975-1979, and 1980-1983 were created. Later, two more data sets were created for the periods of 1964-1967 and 1968-1969 from the set of 1964-1969. However, sonic boom exposure estimates were not available for the 1964 to 1967 time period.

2.4.3 Environmental Data

The sonic boom environmental data, provided by Wyle Laboratories on ASCII files, were transferred to the VAX via an IBM PC XT using a communications package. A sample listing of the exposure data are contained in Appendix 3, Table 1. See Volume I of this report for a full listing.

2.5 Population Distribution and Data Generation

For each county, the annual population from 1964 to 1983 was extracted from the file. Separate sets of tables were prepared showing population for both sexes, for males only, and for females only. Table 1 shows racial distribution by county. Table 2 shows the population by age groups for each county. Table 3 shows age-specific population but with broader intervals. County population by sex is apparent in the total column of any of the table sets mentioned above.

Figures on annual township population are not available. Therefore, estimates of annual township populations were produced from annual county populations under the assumption that, within the township, the trend and magnitude of population growth were proportional to changes at the county level from year to year. Estimates of populations in townships were available for Census years only (e.g., 1960, 1970, 1980) in the Census Bureau's Number of Inhabitants.[10] Township populations for the intervening years were estimated by apportioning changes in the township figures from Census to Census according to proportion change observed among the annual county figures. Only total township populations were estimated. The method was judged too fragile to produce population breakdowns by age, race, sex, etc. This limitation in denominator data at the township level imposes restrictions on the resulting health effects measures at that level. Table 4 shows estimated annual population by township.

Population figures at the county level permitted the construction of age-specific, race-specific, sex-specific, and cause-specific mortality rates. As mentioned above, denominator (population) and numerator (death) data were pooled across time into four time intervals before mortality rates were computed (i.e., 1968-1969, 1970-1974, 1975-1979, and 1980-1983). Tables 5 and 6 represent race-specific and age-specific population for the above time intervals. The age-specific population for the same time intervals, by sex and by county, but with different age categories, was generated on the VAX with a dedicated FORTRAN program. This revised VAX version of age-specific population data was then used as a denominator in computing age-adjusted death rates.

2.6 Mortality Distribution Data Generation

A series of two-way tables which show the number of deaths in each township by year of death for each county of residents was generated through frequency procedures. The marginals give annual county totals and grand county

totals over the entire period. The number of deaths for each township was the sum of deaths of residents belonging to appropriate towns plus a proportion of deaths which were originally designated with a rural/unknown town code within county. The proportion of township population to county population for the appropriate time was used to allocate deaths with a rural/unknown code such that death proportion could not exceed population proportion. The resulting matrix of annual deaths by township is shown in Table 7. Since both numerator and denominator data at the township level were the result of assumptions impossible to verify, no more than crude mortality rates were developed.

The number of deaths by county, time interval, and sex (both male and female) is shown in Table 8 which gives the breakdown by cause of death. Table 9 gives the breakdown by disease group. Table 10 gives the breakdown by age at death, while Table 11 gives the breakdown by race. The death counts shown in these tables were saved in matrix form on computer and were used later in computation of age-specific mortality rates.

Because there was a dramatic change of the ICD coding scheme from revision 7 to 8, it was very difficult and, in some cases, impossible to recode ICD 7 categories into categories compatible with ICD 8 and ICD 9. Initially, cause-specific death was classified into 37 diseases (Table 8) which were subsequently pooled into 12 categories (Table 9). The 12 categories of cause of death were further reduced to five: cardiovascular disease, hypertension, cerebrovascular accident, cancer, and others. The first three listed were always the focus of the study. Cancer was used as an internal control and because of the presence in Nevada of certain potentially carcinogenic activities (i.e., mining) that make Nevada of general epidmiologic interest. Of these five disease categories, cardiovascular disease contained cases of ICD 8 codes of 390-398, 402, 404, 410-429, 440, 441-448, 399, 405-409, 439 and ICD 9 codes of 390-398, 402, 404-429, 440, 441-448, 399, 400, and 439; hypertension included cases of ICD 8 codes of 400, 401, 403, and ICD 9 codes of 140-208; cerebrovascular accidents were cases with codes of 430-438 in both ICD 8 and ICD 9. The number of deaths by these five groups were used as numerator for age-adjustment of cause-specific death rates.

The deaths of each county were pooled for time intervals of 1968-1969, 1970-1974, 1975-1979, and 1980-1983.

2.7 Generation of Environmental Data Distribution

Three versions of environmental data were received from Wyle Laboratories. All were presented in the same file format containing nine variables with a record length of 47 bytes. The first one was a preliminary data set, chiefly useful as a test of the data transfer process. The second version received in November 1985 was the data set that had been loaded on the VAX as the quantitation of the environmental sonic boom exposure in Nevada. A sample of these data is shown in Appendix 3. A final revision of the noise exposure data was received in January 1986, but the differences between the January and November versions of the data were quite minor (changes of less than 5 percent). This report is based on analyses using the November 1985 version of sonic boom exposure data. These data provided four different but partially correlated measures of sonic boom exposure: yearly day-night average C-weighted sound level, peak pressure, number of (sonic boom) events, and average carpet width.

2.8 Merging of Data Sets

The matrices of death and population data were derived from different file sources as described above, stored through a SAS procedure, and retrieved from the system via job control language. Appropriate numerators and denominators were selected through matching their existing common variables before the death rates were calculated.

The mergings of environmental data with the age-adjusted death rates, and the hospital data on the VAX, were accomplished through FORTRAN programs. The fields of year and township/county from each file were programmatically compared and matched before data lines from the sources were written out with one common identification. The nomenclature of the resulting computer file is shown in Appendix 4, Table 1.

2.9 Statistical Methods

The software which was used to generate this report included BMDP, SAS, FORTRAN, and LOTUS 1-2-3.

The BMPD[51] programs which were used to analyze data included:

P1D Simple Data Description and Data Management

P2D Detailed Data Description, Including Frequencies

P3D Comparison of two groups with t-test

P6D Bivariate (scatter) plots

P7D Description of groups with Histograms and Analysis of Variance

P9D Multiway Description of Groups

P4F Two-Way Frequency Tables

P1M Cluster Analysis of Variables

P1R Multiple Linear Regression

P2R Stepwise Regression

P3R Nonparametric Statistics

P1T Bivariate Spectral Analysis

P1V One-Way Analysis of Variance and Covariance.

The SAS[52, 53] program which was used for file management and data analysis entailed several data processing steps as well as SAS procedures.

Various FORTAN[54] utility programs were used on the VAX to read and write files, to perform mathematical computation before collapsing morbidity categories, to create new variables which reflected the percentages among the diagnoses, to pool the environmental data from townships into counties, to collapse the environmental data from annual to multiyear time periods, to calculate the cause-specific death rates as well as their age-adjustment, to perform horizontal linking between environmental data and morbidity by township per year, and cause-specific death rates by county per time period.

Lotus 1-2-3[55] and the application of the functions available in this spread-sheet included generating tables, computation of means, standard deviation and percentages, sorting and ranking of designated fields, extracting data and combining files, and age-adjustment of death rates.

2.10 Statistical Tests

The statistical tests used in this study included two-sample t-test,[56] analysis of variance,[57] simple linear regression,[57] multiple linear regression,[58] stepwise regression,[58] and Friedman two-way analysis of variance.[59]

The cause-specific death ranges for cardiovascular disease, hypertension, cancer, cerebrovascular accident, and other causes for each county for each time period were all age-adjusted through the direct method.[60] For each cause, the death rates of each age stratum within each county, by sex, were calculated

beforehand. Data representing the entire United States for 1968 were used for the age-adjustment.

2.11 Denominator Data Used to Calculate Rates

The population classified by age, sex, and race for the counties and the total population for each township were presented in Section 2.6.

2.12 Calculations on Environmental Data (CLDN)

In order to have an index for ranking the magnitude of sonic boom exposure for each township, as presented in Table 12, the average sound level for each township across the period of 1969 to 1983 was calculated by taking the sum of CLDN values across years and dividing by 15. Of these 58 townships, those with an average CLDN in the upper one-third (CLDN greater than 36 dB) were classified as the high-risk area; those with their average sound levels ranked in the lower one-third (CLDN less than 31 dB) were classified as the low-risk area; the remaining one-third were classified as the medium-risk area. The fluctuation in magnitude of sound exposure of certain townships in certain years was ignored. Figure 1 shows these areas on a map of Nevada. (Note: The word "risk" here is used here solely for convenience and is not intended to imply that proof already exists of a health effect from sonic boom exposure.)

The environmental data at the county level were estimated from the data for townships with a weighting factor. Two methods were explored to create the weighting factor: weighting by event (sonic boom), or weighting by population. The data for each time period were obtained as a weighted average of the annual figures for the constituent years. Therefore, by two different weighting methods, two sets of county data were derived. It was observed that the measures of peak pressure, carpet area, and CLDN generated through these two methods were very similar for each county. The analyses of countywide figures were performed using the exposure data for townships weighted by event (Table 12). For analytic purposes, sonic boom exposure in 1968, which was unavailable, was assumed to be equal to sonic boom exposure in 1969.

2.13 Hospital Discharge Diagnoses

All 33 licensed hospitals in Nevada were asked to participate in the study by providing access to their medical records, specifically their annual discharge

diagnoses summaries. Twenty hospitals agreed to participate (60.6 percent) and 13 hospitals declined to participate. Of the 13 hospitals that declined to participate, 10 were in a high-risk area, two were in an area of medium risk, and one was in a low-risk area. The 20 participating hospitals were distributed across risk factors as follows: 14 were in high-risk areas, five were in areas of medium risk, and one was in a low-risk area. Las Vegas and Reno Townships each contained four participating hospitals, with the remaining participating hospitals distributing one per township.

The discharge diagnoses available at each participating hospital were collected by a field abstractor. The data sought covered the years 1969 through 1985, but the data actually available (within the time and money resources of the study) had gaps in annual information which varied from hospital to hospital. Data were gathered by the five major disease categories used for the mortality analyses (i.e., cardiovascular, hypertension, cerebrovascular accident, cancer, and other causes). Within a township, all data available for a given year were pooled across hospitals. These counts pooled across hospitals for each disease category were converted to percentages of the total discharges in hand for that township in that year. The annual percentage data for each disease category in each township were the basis of analyses.

2.14 Survey to Arcata Personnel

Three corporations serving the Department of Energy field activity within portions of the Tactical Fighter Weapons Center Range Complex, Nellis AFB (i.e., Arcata Associates, Reynolds Electric Company, and Ford Aerospace) were requested to participate in this study through permitting a survey of their employees and the abstracting of their employee medical records. After several attempts had been made to secure the cooperation of each company, only Arcata permitted the survey of its employees, but denied access to medical records. The remaining corporations did not participate in the study.

The survey of Arcata employees was done via questionnaire. The questionnaire solicited information on demographics, the medical history of the employee and his/her immediate family, employee's history of exposure to toxic substances through vocations and avocations, residential history, and history of range assignments where appropriate. One-hundred-and-twenty packages consisting of a cover letter, a questionnaire, a stamped and preaddressed envelope for the return of the

questionnaire, and a stamped unaddressed envelope for mailing the materials to employees were delivered to Arcata Associates. The corporation, as a condition of cooperation, was responsible for mailing the materials to employees. Of the 120 packages distributed, 29 were eventually received by the study, making for a response rate of 24.2 percent.

3.0 RESULTS

3.1 Crude Death Rates

Table 13 shows annual crude death rates per thousand based on all causes of death, by township. Table 14 shows similar figures but by county. Note from either table that crude death rates in Nevada are consistently lower than national figures. These rates were computed using the data shown in Table 4 (population) and Table 7 (deaths).

Table 15 shows crude death rates per hundred thousand by specific causes at the county level, broken down by sex (both male and female) and time interval. The specific causes listed in Table 15 are cancer, respiratory tract, heart disease, hypertension (irrespective of renal disease), cerebral vascular accident, atherosclerosis, other diseases of vessels (arteries, arterioles, and capillaries), other cardiovascular disease (CV-DIS), stress/emotional problems, reproductive system, congenital malformations (malform), and other diagnoses.

Table 16 compares mortality among the three geographic areas of relative sonic boom exposure described earlier in Section 2.12. The upper panel compares crude mortality calculated from township data. Each mean is based on annual data from the appropriate townships. The probability values associated with each mean imply significant variation within the observations contributing to each mean. However, the probability value in the fourth column from the right shows that a one-way analysis of variance performed on the three risk area means was significant. Mean crude death rate increases as the "risk" level of sonic boom exposure increases. Pairwise t-tests were performed and indicate that each mean crude death rate is statistically different from the remaining two. The probabilities associated with these t-tests are given in the three right-most columns. Although the t-tests performed were not adjusted to reflect their post hoc nature, the probabilities are sufficiently small to support assertions of statistical difference.

The lower panel of Table 16 compares age-adjusted, cause, and sex-specific mortality among the three risk areas. Information is presented in the same format as for the upper panel. The bottom-most row presents age-adjusted mortality pooled across cause and sex. In contrast to the findings on crude death rate, there was no indication that overall mean age-adjusted mortality varied significantly

across risk areas. There was a significant main effect of risk area on the data for females only but the pattern of means suggests that the lowest age-adjusted mortality was found in the areas of medium risk. Indeed, the only age-adjusted data found to repeat the pattern of the crude death rates was in deaths due to cerebrovascular accident for both men and women. No other pattern of cause or cause- and sex-specific means showed a significant monotonic increase with this measure of sonic boom exposure.

3.2 Age-Adjusted Mortality Rates by County

Table 17 presents age-adjusted mortality from all causes broken down by time interval, sex, and county within risk area. Note that, with the exception of males in 1968-1969, state total age-adjusted mortality exceeds the national figures, sometimes by a substantial amount. This contrasts with the observation based on crude rates presented above. Note further that generally the mean age-adjusted mortality for the medium-risk area exceeds that of the remaining risk areas.

Table 18 presents data on age-adjusted, cause-specific mortality broken down by time interval, sex, and county within risk area. Each panel of Table 18 presents data from a different cause of death. For cardiovascular mortality (panel 1), it may be seen that State total figures were consistently lower than national figures prior to 1975, but from 1975 onward the State figures consistently exceed the national figures. Inspection of the risk area means reveals no consistent relation between age-adjusted mortality and exposure. For death due to hypertension (panel 2), no consistent structure is observed when State total figures are compared to national figures, nor when risk area means are compared across exposure. For cancer mortality (panel 3), the Nevada State total rates are consistently higher than the national figures. However, no consistent relation is observed between risk area means and noise exposure. For deaths due to cerebrovascular accident (panel 4), the State total figures are consistently less than the national figures until 1970, but from 1970 onward, the State total rates exceed the national rates. Inspection of the risk area means reveals no consistent relation between cerebral-vascular accident mortality and exposure to sonic boom. For deaths due to other causes (panel 5), no national figures were available. Inspection of the risk area means again reveals no consistent relation between exposure to sonic boom and mortality.

3.3 Time Trends Using Mortality Data

Friedman two-way analyses on ranks was used to evaluate time trends of both sound level from sonic booms and age-adjusted mortality from various causes. Table 19 presents mean annual day-night average C-weighted sound level by county and time interval. As may be seen, the rank sums of CLDN increase significantly over time periods, implying generally that sonic boom exposure was increasing as time progressed. Since the sonic boom exposure model developed in Volume I assumed a constant sound level for any one aircraft type, altitude, and Mach number, this increase in CLDN is most likely due to an increase in average number of events per year.

Tables 20 through 25 present age-adjusted mortality from various causes in a similar format. The Friedman analyses show a decline in age-adjusted mortality from all causes over time (Table 20), haphazard changes in age-adjusted cardiovascular mortality over time (Table 21), no significant change in age-adjusted mortality due to hypertension over time (Table 22), an increase in age-adjusted cancer mortality over time (Table 23), haphazard changes in age-adjusted mortality from cardiovascular accidents over time (Table 24), and a decline in age-adjusted mortality from other causes over time (Table 25).

3.4 Correlations Using Mortality Data

Bivariate linear regressions were run as a more sensitive assessment of the relation between sonic boom variables and mortality rates than is yielded by parametric tests of mean differences or nonparametric tests of ranks (given underlying linear relations). At the township level, the available data were the annual crude death rates for all years of the study. At the county level, age-adjusted, sex- and cause-specific rates were available.

Table 26 presents relationships between township-generated crude death rates and measures of sonic boom noise. For sonic boom exposure, the table distinguishes fighter planes from SR-71 operations as well as pooling these two sources together. Exposure variables were number of events (number of booms), average peak pressure, CLDN and carpet width (carpet width is not available for the aircraft pooled together). Data are shown for all townships, and for townships within risk areas. Cell entries in the table are the number of data points used (N), strength of the linear relation between sonic boom noise and crude death rate (r, r^2), and the probability (p-value) associated with the t-test of the notion that

the linear relationship is truly zero. As may be seen, 25 out of the 44 correlations emerged as significant at the 5 percent confidence level ($p<.05$). The fact that the four individual measures of sonic boom exposure (i.e., Event, Pressure, Carpet, CLDN) are not independent accounts for some of these significant effects. Further, in all but one case (i.e, fighter events and crude death rate in medium-risk areas), the r^2 measure of variance accounted for is equal to or less than 0.1. Regression equations and residual mean squares for statistically significant correlations appearing in Table 26 are shown in Appendix 5, Table 1.

Table 27 shows linear relations between county level age-adjusted, cause- and sex-specific death rates and measures of sonic boom exposure within aircraft type (all, fighters, SR-71). Of the 165 correlations presented in the table (disregarding the marginal "all causes"), there were 15 found to be statistically significant ($p<.05$). Again, dependence among the four exposure parameters and dependence between each gender and data pooled across gender accounts for some of the significant results. Eight of the 15 significant correlations involved mean peak pressure. None of the significant correlations involved number of events and only two involved the only other measure of cumulative noise exposure, CLDN (all or SR-71 aircraft, aircraft, female and "other" causes) and in both cases, the r^2 value was less than 0.1 and the correlation coefficient was negative.

As may be seen in the table, mean peak pressure from SR-71 operations was inversely related to age-adjusted deaths from "other" causes in both men and women, and thus also in both sexes pooled together. (Throughout this discussion of the data relationships, the potential "cause" variable - sonic boom exposure - is identified first before the potential health "effects" variable.) By inspection, the SR-71 data are responsible for the emergence of the same pattern when data from fighters and SR-71s are pooled together. In contrast, mean peak pressure from fighter operations was directly related to age-adjusted mortality due to cerebrovascular accident in women and, therefore, in both sexes pooled together. However, these direct relationships vanished when data from both aircraft types were pooled.

To finish exposition on Table 27, carpet area from only fighters varied directly with age-adjusted mortality due to cerebrovascular accident in women and in both sexes pooled together. Carpet area from only SR-71 operations varied with age-adjusted mortality due to "other" causes in each sex and therefore in both sexes pooled. (Note: Data on carpet area was unavailable for aircraft types pooled

together.) Finally, sound level from SR-71 operations varied inversely with age-adjusted mortality due to "other" causes in women and this observation, while absent in the fighter plane data, emerged when data from both aircraft types were pooled. Regression equations and residual mean squares for statistically significant correlations appearing in Table 27 are shown in Appendix 5, Table 2.

Table 28 shows information similar to that presented in Table 27, but limited to counties with the high-risk designation. The linear relations between sonic boom exposure parameters within aircraft type and age-adjusted cause- and sex-specific mortality in the high-risk counties are presented in Table 28. Of the 165 correlations presented (ignoring the marginal cases), only 10 achieved statistical significance at the 5 percent level. Again, the caveat about the dependence of the four noise parameters and the gender divisions must be raised, and it will be noted that the sample size becomes appreciably smaller. It is important to note that the pattern of correlations observed between exposure to sonic boom and age-adjusted cause-and sex-specific mortality pooled across risk areas (Table 27) does not emerge when attention is focused upon the high-risk area (Table 28). The high-risk area in isolation demonstrates absolutely no linear relations between sonic boom exposure parameters and deaths due to cerebrovascular accident, SR-71 exposure is not associated with death due to "other" causes, and no associations found in Table 28 at the fighter plane or SR-71 level are strong enough to emerge when the data are pooled across aircraft type. Not seen in the pooled data but present in the high-risk areas, as may be seen in Table 28, are six significant associations ($p<.05$) between sonic boom exposure and deaths due to cardiovascular conditions, hypertension, and cancer. Events produced by SR-71 activities are inversely related to age-adjusted cardiovascular mortality in males. Carpet area associated with fighter plane activity is inversely related to age-adjusted hypertension mortality in males and in both sexes pooled together. Age-adjusted cancer mortality in males and in both sexes pooled together is shown to be positively associated with events and sound levels produced by SR-71 operations. Finally, Table 28 shows sound level produced by fighter operations is inversely related to age-adjusted mortality due to "other" causes in each and, therefore, both sexes. Regression equations and residual mean squares for statistically significant correlations apparent in Table 28 appear in Appendix 5, Table 3.

Table 29 shows information similar to that presented in Table 27, but limited to counties with the medium-risk designation. The linear relations between

sonic boom noise parameters within aircraft type and age-adjusted cause- and sex-specific mortality in the counties exposed, on average, to a moderate intensity of sonic boom noise, are presented. Note that no fighter plane information is available for the medium-risk area. Of the 105 correlations shown in the table (ignoring the marginal), six were statistically significant. The earlier remarks about sample size and dependence apply here as well. As found for the high-risk area, the medium-risk area in isolation (Table 29) fails to mimic the pattern of findings evident when the data were pooled across risk areas (Table 20), although the lack of fighter plane data for this area makes direct comparison impossible. It is evident that in the medium-risk area, a direct and consistent relation between sound level from both all aircraft and SR-71 operations and age-adjusted mortality due to cerebrovascular accident in males and in both sexes pooled together was found. There is also a direct relation between events from all aircraft and age-adjusted mortality due to hypertension in males. Finally, there was observed a direct relation between sound level produced by SR-71 operations and age-adjusted mortality in women due to cardiovascular conditions. Regression equations and residual mean squares for the significant correlations appearing in Table 29 are given in Appendix 5, Table 4.

Table 30 shows information similar to that presented in Table 27, but limited to counties with the low-risk designation. The linear relations between sonic boom exposure and age-adjusted cause- and sex-specific mortality in the counties exposed, on average, to the lowest intensity of sonic boom exposure are presented. Of the 165 correlations presented (ignoring the marginal), statistical significance was obtained by 28. The earlier remarks about sample size and dependence apply here as well. There is a considerable correspondence between the patterns of data for the low-risk area and the data pooled across risk areas (Table 27). The similarities are: mean peak pressure from SR-71 operations was inversely related to age-adjusted deaths from "other" causes in both men and women and, thus, also in both sexes pooled together. These data from SR-71 operations are responsible for the emergence of the same pattern when data from the two aircraft types are pooled together. Mean peak pressure from fighter operations was directly related to age-adjusted mortality due to cerebrovascular accident in women and, therefore, in both sexes pooled together. Carpet area from SR-71 operations is directly related to age-adjusted mortality for "other" causes in each sex. Therefore, in both sexes, carpet areas from fighters are directly related

to age-adjusted mortality due to cerebrovascular accident in women. The low-risk group of counties did not shown an inverse relation between sound pressure levels from SR-71s or aircraft types pooled and age-adjusted mortality due to "other" causes in women, as appeared in the data set where risk areas were pooled (Table 27).

Considering deaths from cerebrovascular accidents, Table 30 shows that events from SR-71 operations in the "low risk" area were directly related to age-adjusted mortality in women, and that sound level from fighters was related to age-adjusted mortality in each sex. Note that when data were pooled across aircraft type, the relations between sound level from fighters and cerebrovascular death were distilled into a single inverse relation for males only.

Considering cancer deaths, signs on coefficients in the low-risk group contrasted with signs found in the high-risk group (Table 28). In the low-risk group, age-adjusted cancer mortality was inversely related to sound levels from SR-71 operations in each sex and in both sexes. When data were pooled across aircraft type, that relation held only for females, and both sexes pooled together. Note that in the high-risk group, the only other group where cancer mortality was significantly related to sonic boom exposures, the signs on the coefficients relating cancer mortality sound level from SR-71 operations were positive. These relations evidently washed out of the data pooled across risk groups (Table 27).

Considering deaths from hypertension, Table 30 shows that sound level from SR-71 operations was inversely related to age-adjusted mortality in women only. Number of events from fighters was directly related to mortality in males and both sexes pooled together, but number of events from all aircraft pooled together was directly related to each sex. Note that a similar relation was found in the medium-risk group between males and events from all aircraft, but nothing similar was found in the high-risk group (Table 28) and the relation was close to significant for males with all aircraft and with fighters only in the data pooled across risk groups (Table 27).

Considering cardiovascular mortality, sound level from fighters and from all aircraft pooled together was inversely related to age-adjusted deaths in males only. Regression equations and residual mean squares for significant correlations appearing in Table 30 appear in Appendix 5, Table 5.

3.5 Morbidity Studies

3.5.1 Hospital Discharge Diagnoses

Annual data were contributed by more than nine hospitals for the period from 1979 through 1984. In both Union and Sparks Townships, the only data available were from 1984. All available discharge diagnoses from Reno Township for 1978 and for Nelson Township for 1979 were cancers. Only one township in this data set was in a low-risk area, but five townships were in the medium-risk area, and eight townships were in the high-risk area. Because the sample size in the low-risk area was inappropriately small for statistical analyses, the medium- and low-risk data were pooled together and the result was pitted against the data from the high-risk area for analyses.

Table 31 shows means of cause-specific percentage morbidity in townships within the two risk areas (high, medium-low). A one-way analysis of variance was performed on the cause-specific percentages across townships within each risk area. As may be seen in Table 31, seven of the 10 tests indicated significant variability in cause-specific percentage morbidity among the townships within a risk area. Student's t-test was used to evaluate differences in cause-specific morbidity between the high- and medium-/low-risk areas. As the table shows, a statistically significant difference between means was observed only for cardiovascular morbidity, such that mean percent cardiovascular morbidity was greater for the high-risk area than for the medium-/low-risk areas ($<.05$). (Note that the application of analysis of variance here may have masked all differences.)

The mean percentage morbidity of cardiovascular diseases was greater than the mean of any of the remaining categories ($p < .05$). Following cardiovascular disease, the rank of mean percentage morbidity was, in descending order: cancer, cerebrovascular accident, hypertension ($p < .01$). This pattern may interact with risk area. In the medium-/low-risk data, there were no differences in the mean percentage morbidity of cardiovascular disease and cerebrovascular accident, nor between the latter and hypertension, as illuminated by paired t-tests ($p > .05$).

Table 32 shows linear relations between cause-specific percent morbidity derived from hospital discharge diagnoses and measures of sonic boom exposure within aircraft type and risk area. Of the 165 correlations presented in the table, 19 were found to be statistically significant. Dependence among the four exposure parameters accounts for some of the significant results.

The relations shown in Table 32 involving mean peak pressure and morbidity due to "other" causes are strikingly similar to the mortality data presented earlier (see Tables 28 and 30). As may be seen in the table, mean peak pressure from SR-71 operations in the high-risk area is inversely related to morbidity due to "other" causes. The inverse relation also holds for mean peak pressure due to all aircraft in the high-risk area, and for SR-71 and all aircraft when data are pooled across risk areas. In the mortality data pooled across risk areas (Table 27), mean peak pressure from SR-71 operations was inversely related to deaths from "other" causes. When mortality data from high-risk area were examined in isolation (Table 28), their relations were not statistically significant, but it is noteworthy that the signs of the coefficients were negative.

Returning to Table 32, other significant linear relations between morbidity due to "other" causes and exposure parameters were found with number of events due to SR-71 operations in the high-risk area (positive) and carpet area associated with SR-71 operations when data were pooled across risk areas.

For SR-71 operations, statistically significant associations appear between most of the exposure parameters and cancer morbidity, chiefly in the high-risk area. As may be seen in the high-risk panel of Table 32, events from SR-71s are inversely related to cancer morbidity, mean peak pressure from SR-71s is positively related to cancer morbidity, and carpet area from SR-71 operations is negatively related to cancer morbidity. This last relation holds when SR-71 data were pooled across risk areas. There is no significant correlation with CLDN for cancer morbidity.

SR-71 operations are associated with most of the significant relations between noise parameters and morbidity due to hypertension. In the medium-/low-risk panel of Table 32, number of SR-71 events is inversely correlated with hypertension morbidity and this relation holds when data are pooled across aircraft type in the medium-/low-risk area. In the high-risk panel of Table 32, carpet area from each aircraft type (SR-71 and fighters) is positively associated with hypertension morbidity. (Note that carpet area pooled across aircraft type is unavailable.) Also, sound level from fighters is positively related to hypertension, but only in the high-risk areas. The only significant linear relation between exposure parameters and cardiovascular morbidity involved a direct relation with sound level from all aircraft when data were pooled across risk areas. Regression equations

and residual mean squares for significant correlations appearing in Table 32 are given in Appendix 5, Table 6.

3.5.2 Results of the Survey to Arcata Personnel

Twenty-three (79 percent) of the 29 Arcata employees who responded to the questionnaire were male and six (21 percent) of the respondents were female. The distribution of ethnic groups was: 22 whites (76 percent), five blacks (17 percent), and two others (7 percent). Seventeen (59 percent) of them had at least some college education, nine (31 percent) were high school graduates, and three (10 percent) did not disclose their educational levels. The mean age of the respondents was 38 (±12) and ranged from 21 to 66.

The respondents' habits of tobacco and alcohol use and the family and medical histories of respondents are summarized in Appendix 6, Tables 1 and 2 respectively. Less than 21 percent of these employees mentioned family history of either heart disease or hypertension. Twenty-seven (93 percent) of the respondents considered themselves in good health. Twelve (41 percent) of the subjects saw a doctor regularly, but 17 (59 percent) did not. Eight (28 percent) of the subjects followed a special diet. The diet history is presented in Appendix 6, Table 3. The most prevalent health problem these respondents encountered was allergy. None of the remaining ailments surveyed assaulted more than 14 percent of these employees (Appendix 6, Table 4). Only two had heart disease and two had hypertension. Hazards to which these employees were exposed are given in Appendix 6, Table 5. Thirteen (45 percent) had avocational exposure to loud noise. The average length of exposure was about 15.2 (±16.0) years. Again, the most frequent occupational exposure was to noise, with 20 (69 percent) respondents exposed on average for 10.7 (±8.3) years. The second most frequent exposure listed was to sonic boom, with 19 respondents (66 percent) exposed on average for 8.2 (±7.3) years.

Twenty-one (72 percent) of these 29 Arcata employees provided their judgments of residential exposure to sonic boom commencing 1960. Of the 76 residential locations reported, only 28 (37 percent) were in Nevada, 46 (61 percent) were not in Nevada, and two locations were unknown. By the length of stay, 10 (48 percent) of the people mostly resided outside Nevada, and two (10 percent) did not disclose their location. Counting the length of exposure at various residences, more than 11 (51 percent) of these respondents reported experiencing more than 10

to 100 sonic boom per year; four (19 percent) of these respondents indicated that they usually had no concern. The comparisons of residential exposures to sonic boom, either by personal usual experience or by site of each residence, are summarized in Appendix 6, Table 6.

In this sample of 29, only three subjects suffered from either heart disease or hypertension, and all three subjects were exposed to sonic booms either at work or at their residences. The extremely small number of cases discouraged us from pursuing further statistical analysis.

4.0 DISCUSSION

The basic question that motivated the present effort concerned the existence of a relationship between exposure to sonic booms and adverse health phenomena. The data collected, as presented here, offer no convincing answer to that question in either the affirmative or the negative. However, establishing the data base – that is, bringing together the diverse and various forms of information concerned and linking them together in a fashion suitable for analysis – is, in itself, a worthwhile accomplishment.

Clearly, no pattern in the results presented here implicates sonic booms as a public health hazard to any persuasive degree. No constellation of direct associations was found between the exposure data, as presently cast, and the health measures, as presently constructed. Even the areas of mortality due to cardiovascular and hypertensive illness, which seemed a priori to have a certain promise, generally failed to be implicated.

Following initiation of the program, it became clear that a retrospective study on a narrowly-defined cohort on whom existed reasonably good data as to exposure and health might be possible. The population in question consisted of civilians who were or had been employed by Department of Energy contractors on some of the restricted portions of the TFWC Range Complex. However, permission to access the vast bulk of that limited population, and the health records of any portion of it, was never granted. Therefore, an efficient and practical search within a unique but limited population for an association between what was believed to be high levels of exposure to sonic booms and health effects was impossible to mount.

The statewide study that was accomplished necessarily relies on estimates, extrapolations, and assumptions to a troublesome degree. The largely rural nature of Nevada encouraged coding of mortality in a way not well-suited to accurate geographic mapping. Deaths given only a rural code were allocated to townships by the study in a manner that seemed plausible, but certainly not verifiable. Potentially, this allocation procedure diluted any observed effect of sonic booms that may exist. Further, township populations could not be partitioned on race, sex, or age. A further complication is that the population at risk is not very large in vast areas of Nevada, which may well impose a floor effect on the data.

These problems with mortality and population-at-risk data at the township level are attenuated by operating at the county level. However, the trade-off is a dilution of precision in the exposure estimates. Most counties in Nevada are vast areas. Supersonic activities that may have been concentrated in one portion of a county, or even of a township, are necessarily but implausibly applied to the county as a whole. The result is a dilution of observed effects that may exist in terms of human health and exposure to sonic booms.

What explicitly may not be inferred from the present lack of findings is that there are no findings to detect. Still, the inherent limitations in a statewide study cannot be overcome by statistical methods of any sophistication. There is no way to predict what would have emerged from the data on Range workers, where good health records could have been partitioned on potentially high quality sonic boom exposure data. Full access to the noise exposure and health records for this group would be required for a future effort to discover any relation between exposure to sonic booms and health of this unique population. Alternatively, a long term prospective study of any residents that can be shown to have a significant exposure to sonic boom could be conducted to eliminate the inherent dilution in accuracy involved in the global data employed for this study. Based on the results of this study, it is expected that only such detailed studies will be able to determine if there are any significant health effects of sonic boom exposure.

5.0 SUMMARY OF FINDINGS

The results presented above may be summarized briefly as follows: Generally speaking, mortality rates in Nevada seem to be consistent with national figures. While the crude mortality rates of the State were consistently lower than that of the nation across 16 years, the differences were insubstantial (Table 12). When mortality rates were age-adjusted, the State figures tended to exceed those of the nation but, again, by an insubstantial factor, although the mortality rate among females from 1980 to 1983 may be troubling (Table 17). Breaking the age-adjusted mortality into cause-specific figures does not alter the impression that mortality in Nevada is unremarkable, as depicted by the data presented above.

There were three general attacks on assessing the relation, if any, between exposure to sonic booms and age-adjusted mortality. The first attack was to compare mean mortality between discrete geographic areas seeming to have different degrees of exposure to booms. A preliminary exam of crude mortality rates showed that mean crude mortality increased systematically from low-risk areas to high-risk areas (Table 16). However, this effect vanished when rates were age-adjusted and breaking the adjusted rates into cause-specific categories failed to resurrect it (Table 18).

Time trends were examined in a preliminary fashion to see if changes in exposure would predict changes in age-adjusted mortality. Yearly day-night average C-weighted sound level was chosen as the best, a priori, single parameter of exposure, and was found to be generally on the increase over the time periods examined (Table 19). However, the only age-adjusted, cause-specific mortality rate to show a similar systematic increase was that of cancer. At the present state of knowledge, it is difficult to imagine how to specify a carcinogenic mechanism involving sonic booms.

A third attempt to access associations between sonic boom exposure and mortality was made through bivariate linear regressions. Perhaps the most noteworthy, or memorable, pattern of significant correlations that emerged seemed to involve SR-71 operations and age-adjusted mortality due, usually to so-called "other" causes – that is, causes not explicitly singled out for examination. The associations were <u>inverse</u> relations. Again, it is hard to explain these data with a causal connection linking directly sonic booms from only SR-71 aircraft

with improved community health. The fact that this pattern of correlations seemed stronger in the low-risk areas than in other areas may, eventually, provide a hint as to how this curious phenomenon arose in the data. The same sort of pattern was suggested by the morbidity data due, in part at least, to the dependence between mortality rates and morbidity rates. (Note that, since the patterns relating the mortality data and, for example, SR-71 sonic boom exposure, also emerge in the morbidity data, the assumption that hospital records reflect the morbidity of nearby residents may be bolstered.)

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FIGURE 1

Map of Nevada with Risk Areas Denoting

Estimated Sonic Boom Exposure

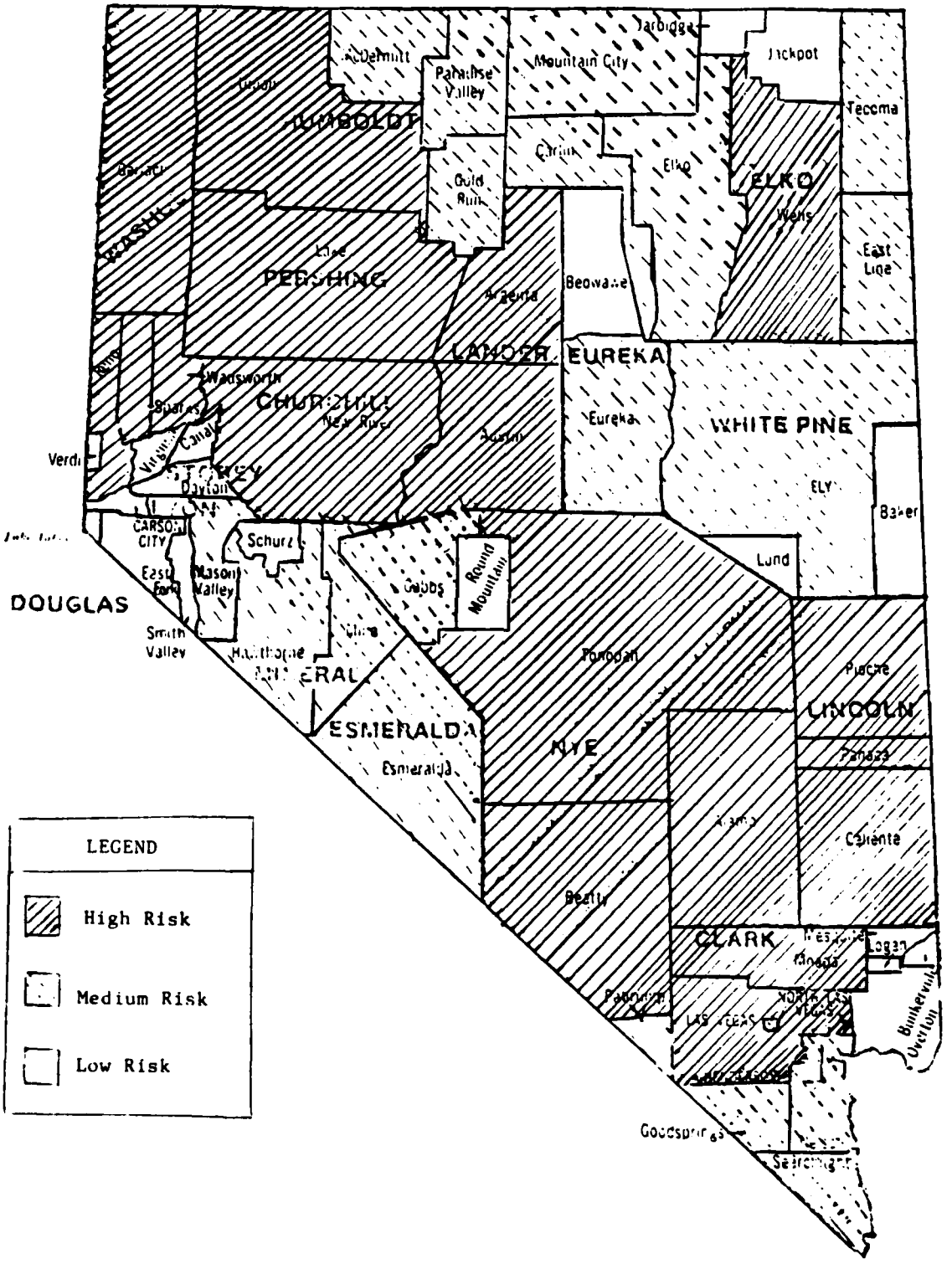


Table 1a. Race-specific population distribution for both sexes, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	775644	56482	14625	39809	886560
CARSON CITY	31125	463	1565	777	33930
CHURCHILL	13384	100	700	535	14720
CLARK	434803	51457	3330	25430	515020
DOUGLAS	20666	37	381	336	21420
ELKO	16977	93	1685	1125	19880
ESMERRALDA	843	0	23	34	900
EUREKA	1301	0	43	56	1400
HUMBOLDT	9768	45	826	1181	11820
LANDER	4789	0	170	301	5260
LINCOLN	4043	0	75	172	4290
LYON	14289	19	590	342	15240
MINERAL	4986	389	652	264	6290
NYE	12387	81	518	334	13320
PERSHING	3371	0	206	162	3740
STOREY	1626	0	41	33	1700
WASHOE	192364	3822	3633	8501	208320
WHITE PINE	8683	0	259	368	9310

YEAR=1983

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	803037	58477	15141	41214	917870
CARSON CITY	31584	470	1588	788	34430
CHURCHILL	13539	102	708	541	14890
CLARK	451798	53468	3460	26424	535150
DOUGLAS	21418	39	394	349	22200
ELKO	17899	98	1777	1186	20960
ESMERRALDA	862	0	24	34	920
EUREKA	1319	0	44	57	1420
HUMBOLDT	9916	46	838	1199	12000
LANDER	5053	0	180	317	5550
LINCOLN	4203	0	78	179	4460
LYON	14964	20	618	358	15960
MINERAL	4922	384	643	261	6210
NYE	14405	94	603	389	15490
PERSHING	3443	0	211	166	3820
STOREY	1674	0	42	34	1750
WASHOE	196566	3905	3713	8686	212870
WHITE PINE	9131	0	272	387	9790

Table 1b. Race-specific population distribution for males, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	392984	28345	7270	20013	448611
CARSON CITY	15697	344	785	427	17253
CHURCHILL	6777	62	335	250	7424
CLARK	220281	25555	1660	12242	259739
DOUGLAS	10512	20	191	175	10898
ELKO	8861	63	845	673	10442
ESMERRALDA	445	0	12	22	478
EUREKA	704	0	21	30	755
HUMBOLDT	5266	21	415	723	6425
LANDER	2587	0	77	183	2848
LINCOLN	2012	0	39	78	2129
LYON	7176	10	300	204	7691
MINERAL	2523	210	322	134	3189
NYE	6656	49	274	166	7144
PERSHING	1775	0	93	106	1974
STOREY	838	0	21	8	868
WASHOE	96599	2021	1778	4463	104861
WHITE PINE	4347	0	141	206	4694

YEAR=1983

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	406862	29346	7526	20720	464454
CARSON CITY	15928	349	797	433	17507
CHURCHILL	6855	63	339	252	7510
CLARK	228891	26554	1725	12721	269891
DOUGLAS	10895	21	198	182	11295
ELKO	9342	67	891	710	11010
ESMERRALDA	455	0	12	22	489
EUREKA	714	0	21	31	766
HUMBOLDT	5346	22	421	734	6523
LANDER	2730	0	82	193	3005
LINCOLN	2091	0	41	81	2213
LYON	7515	11	315	214	8054
MINERAL	2491	208	318	132	3148
NYE	7740	56	318	193	8308
PERSHING	1812	0	95	109	2016
STOREY	863	0	22	8	893
WASHOE	98709	2065	1817	4560	107151
WHITE PINE	4571	0	149	217	4936

Table 1c. Race-specific population distribution for females, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	382661	28138	7355	19796	437949
CARSON CITY	15429	119	780	350	16677
CHURCHILL	6607	38	365	286	7296
CLARK	214522	25902	1669	13188	255281
DOUGLAS	10154	18	190	161	10522
ELKO	8116	30	840	451	9438
ESMERRALDA	398	0	12	12	422
EUREKA	597	0	22	26	645
HUMBOLDT	4502	24	411	459	5395
LANDER	2202	0	93	117	2412
LINCOLN	2031	0	36	94	2161
LYON	7113	9	289	138	7549
MINERAL	2463	178	330	131	3101
NYE	5731	32	244	168	6176
PERSHING	1597	0	113	56	1766
STOREY	788	0	19	25	832
WASHOE	95765	1801	1855	4038	103459
WHITE PINE	4336	0	117	162	4616

YEAR=1983

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	396175	29131	7615	20495	453416
CARSON CITY	15656	120	791	355	16923
CHURCHILL	6684	39	369	289	7380
CLARK	222906	26914	1735	13703	265259
DOUGLAS	10523	18	197	167	10905
ELKO	8557	32	886	476	9950
ESMERRALDA	407	0	12	12	431
EUREKA	606	0	23	26	654
HUMBOLDT	4570	24	417	466	5477
LANDER	2323	0	98	124	2545
LINCOLN	2112	0	37	98	2247
LYON	7449	9	303	144	7906
MINERAL	2431	176	326	129	3062
NYE	6665	38	284	195	7182
PERSHING	1631	0	115	57	1804
STOREY	812	0	20	26	857
WASHOE	97857	1840	1895	4126	105719
WHITE PINE	4560	0	123	170	4854

Table 2a. Age-specific population distribution for both sexes, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	886560	14134	12630	46766	90763	89578	101828	160754	116634	94593	86053	50943	21882
CARSON CITY	33930	457	409	1492	3282	3658	3396	5881	4570	3569	3727	2469	1042
CHURCHILL	14720	253	232	868	1610	1537	1532	2147	1756	1448	1512	1146	680
CLARK	515020	8466	7540	28144	54808	52663	60573	92767	68719	54733	47558	28011	11039
DOUGLAS	21420	350	269	1047	2139	2055	1651	4339	3061	2313	2486	1238	471
ELKO	19880	327	342	1227	2292	2315	1862	3204	2619	2001	1915	1180	596
ESMERRALDA	900	12	15	54	77	78	77	134	108	110	134	69	32
EUREKA	1400	36	19	94	138	157	150	237	162	154	132	52	42
HUMBOLDT	11820	216	219	795	1275	1211	1234	2058	1462	1305	1173	594	279
LANDER	5260	128	132	386	587	552	692	991	615	502	395	210	69
LINCOLN	4290	100	100	339	511	571	345	568	463	334	412	392	157
LYON	15240	262	278	920	1682	1493	1219	2247	1833	1713	1844	1215	533
MINERAL	6290	111	77	372	731	700	503	896	739	739	743	458	218
NYE	13320	211	216	779	1409	1432	1290	1968	1714	1533	1562	884	319
PERSHING	3740	70	80	229	353	363	404	565	395	405	448	285	144
STOREY	1700	29	24	92	135	156	183	285	228	221	198	124	25
WASHOE	208320	2993	2550	9473	18772	19743	25932	40883	27139	22446	20744	11883	5765
WHITE PINE	9310	138	171	606	1080	956	685	1396	1033	1082	1042	705	418

YEAR=1983

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	917870	14633	13076	48417	93967	92743	105424	166431	120753	97933	89092	52743	22655
CARSON CITY	34430	463	415	1514	3333	3713	3446	5968	4637	3621	3781	2505	1057
CHURCHILL	14890	256	234	875	1629	1555	1551	2171	1776	1465	1530	1160	688
CLARK	535150	8797	7835	29244	56949	54720	62940	96394	71405	56872	49417	29106	11471
DOUGLAS	22200	362	279	1085	2216	2131	1711	4497	3172	2397	2576	1284	489
ELKO	20960	345	360	1294	2415	2441	1964	3378	2761	2109	2020	1244	629
ESMERRALDA	920	12	15	56	79	81	78	138	110	112	137	70	32
EUREKA	1420	37	19	96	138	159	151	240	164	156	134	53	42
HUMBOLDT	12000	219	223	809	1295	1229	1253	2087	1484	1325	1191	603	283
LANDER	5550	135	139	407	619	582	730	1046	650	530	416	222	73
LINCOLN	4460	104	104	351	532	594	359	590	481	346	428	408	163
LYON	15960	275	291	963	1761	1563	1277	2354	1919	1794	1931	1272	559
MINERAL	6210	110	76	368	724	693	497	884	730	730	735	453	216
NYE	15490	245	252	905	1642	1666	1499	2289	1993	1783	1817	1029	372
PERSHING	3820	72	82	233	361	371	412	577	403	414	459	291	145
STOREY	1750	30	24	93	141	161	180	294	234	227	203	127	25
WASHOE	212870	3059	2606	9678	19182	20174	26498	41776	27731	22937	21197	12142	5891
WHITE PINE	9790	145	180	638	1135	1004	720	1467	1086	1138	1095	740	439

Table 2b. Age-specific population distribution for males, by county, 1982-1983. Similar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	448611	7339	6438	23776	46482	45871	51655	81648	60187	48402	43279	24637	8893
CARSON CITY	17253	220	220	767	1664	1858	1855	3122	2370	1794	1834	1178	370
CHURCHILL	7424	128	125	450	780	811	815	1065	902	714	773	547	315
CLARK	259739	4403	3817	14229	28078	26889	30887	46424	35182	27956	23785	13544	4544
DOUGLAS	10898	180	137	545	1061	1048	764	2234	1622	1177	1277	644	210
ELKO	10442	177	168	653	1193	1277	922	1659	1416	1101	1038	599	242
ESMERRALDA	478	8	9	22	36	41	42	70	60	64	65	43	16
EUREKA	755	14	11	49	60	80	90	133	81	88	95	33	20
HUMBOLDT	6425	125	122	440	645	629	683	1145	792	745	673	289	137
LANDER	2848	65	66	194	326	284	372	541	337	295	226	106	38
LINCOLN	2129	60	54	175	279	222	183	287	233	175	208	185	66
LYON	7691	128	148	339	875	773	581	1113	918	855	954	622	233
MINERAL	3189	54	40	176	367	350	283	456	386	370	379	225	107
NYE	7144	122	113	416	746	757	688	1042	929	869	837	474	150
PERSHING	1974	32	29	137	167	190	212	325	191	231	257	143	63
STOREY	868	17	12	42	77	86	80	134	131	107	109	60	12
WASHOE	104861	1555	1298	4751	9847	10125	12841	21113	14084	11373	10275	5614	2188
WHITE PINE	4694	71	92	316	559	495	323	697	560	541	529	336	175

YEAR=1983

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	464454	7599	6665	24616	48125	47492	53480	84531	62313	50111	44808	25507	9206
CARSON CITY	17507	224	224	778	1688	1886	1882	3169	2404	1820	1861	1196	375
CHURCHILL	7510	129	128	456	788	819	825	1078	912	722	782	553	319
CLARK	269891	4575	3966	14786	29176	27941	32095	48239	36558	29048	24714	14073	4721
DOUGLAS	11295	186	142	564	1101	1085	792	2315	1682	1219	1323	668	218
ELKO	11010	187	177	687	1258	1346	972	1749	1492	1160	1093	631	255
ESMERRALDA	489	8	9	23	38	41	44	72	62	65	66	44	16
EUREKA	766	14	11	49	61	80	92	135	82	90	97	34	20
HUMBOLDT	6523	127	123	447	656	637	694	1162	804	756	683	294	138
LANDER	3005	68	69	204	344	300	392	570	355	312	239	112	40
LINCOLN	2213	62	56	182	290	233	191	299	243	181	216	193	67
LYON	8054	134	155	355	917	810	608	1166	962	895	999	652	243
MINERAL	3148	53	40	174	362	344	279	450	381	366	375	222	106
NYE	8308	142	132	484	868	880	800	1212	1080	1010	974	551	175
PERSHING	2016	33	29	140	169	195	216	332	195	238	262	147	63
STOREY	893	17	13	43	77	90	83	138	135	111	113	62	12
WASHOE	107151	1589	1326	4854	9858	10345	13121	21574	14391	11621	10499	5737	2235
WHITE PINE	4936	74	97	331	588	523	340	733	588	570	557	354	183

Table 2c. Age-specific population distribution for females, by county, 1982-1983. Similar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	437949	6795	6192	22990	44281	43707	50172	79106	56447	46191	42773	26306	12989
CARSON CITY	16677	236	189	705	1619	1799	1541	2758	2201	1775	1892	1290	672
CHURCHILL	7296	125	107	416	830	729	718	1081	854	734	739	599	365
CLARK	255281	4063	3723	13915	28729	25774	29685	46343	33537	26777	23773	14467	5979
DOUGLAS	10522	170	132	502	1078	815	886	2105	1439	1136	1208	594	261
ELKO	9438	150	174	575	1098	1038	941	1545	1203	900	878	581	355
ESMERRALDA	422	3	6	32	41	36	33	64	47	46	70	25	15
EUREKA	645	22	8	45	75	77	60	104	82	65	64	20	22
HUMBOLDT	5395	90	98	355	629	580	551	910	670	560	500	305	142
LANDER	2412	63	66	192	261	268	320	451	279	207	169	105	32
LINCOLN	2161	40	46	163	232	347	162	280	228	159	204	207	92
LYON	7549	135	130	428	806	721	639	1134	915	859	890	592	301
MINERAL	3101	58	36	198	369	354	220	440	353	368	364	234	111
NYE	6176	88	103	362	663	676	602	926	785	665	724	410	169
PERSHING	1766	38	52	92	187	172	192	240	204	175	193	141	80
STOREY	832	12	11	49	62	70	103	151	96	113	89	64	12
WASHOE	103459	1438	1252	4721	9126	9618	13090	19771	13055	11074	10468	6268	3577
WHITE PINE	4616	67	79	291	522	461	363	697	473	540	513	368	243

YEAR=1983

COUNTY	AGE_ALL	AGE_LT1	AGE_YR1	AGE2_5	AGE6_12	AGE13_18	AGE19_24	AGE25_34	AGE35_44	AGE45_54	AGE55_64	AGE65_74	AGE75_UP
STATE TOTAL	453416	7035	6411	23802	45843	45251	51945	81900	58440	47822	44284	27235	13448
CARSON CITY	16923	240	191	715	1643	1826	1563	2799	2233	1801	1920	1310	682
CHURCHILL	7380	126	108	421	841	737	725	1094	863	743	747	606	369
CLARK	265259	4221	3869	14459	27774	26781	30845	48155	34848	27824	24702	15032	6214
DOUGLAS	10905	176	137	519	1117	845	919	2182	1491	1178	1253	616	271
ELKO	9950	158	183	606	1157	1097	991	1629	1268	949	926	613	374
ESMERRALDA	431	4	6	33	44	37	35	65	48	48	71	26	16
EUREKA	654	23	8	45	75	78	60	105	82	66	65	20	22
HUMBOLDT	5477	92	99	362	640	591	559	925	681	569	507	309	146
LANDER	2545	67	69	202	276	284	338	475	294	218	179	110	34
LINCOLN	2247	42	48	170	241	361	168	292	238	165	212	215	96
LYON	7906	141	136	448	843	754	670	1189	958	900	933	620	314
MINERAL	3062	57	36	194	362	349	218	435	349	364	360	231	110
NYE	7182	103	120	421	772	787	700	1077	913	773	842	478	197
PERSHING	1804	39	53	93	190	178	197	246	209	178	196	145	82
STOREY	857	13	12	51	64	72	106	156	99	117	91	65	12
WASHOE	105719	1470	1280	4824	9325	9829	13376	20203	13340	11316	10697	6405	3655
WHITE PINE	4854	71	83	305	548	486	382	734	498	568	539	388	255

Table 3a. Final version of age-specific population distribution for both sexes, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	886560	62167	130059	163473	277388	94593	86053	72825
CARSON CITY	33930	1965	4776	5953	10451	3569	3727	3511
CHURCHILL	14720	1155	2305	2570	3903	1448	1512	1826
CLARK	515020	37333	78270	96991	161486	54733	47558	39050
DOUGLAS	21420	1390	3047	3074	7400	2313	2486	1709
ELKO	19880	1596	3324	3445	5823	2001	1915	1776
ESMERRALDA	900	67	116	130	242	110	134	101
EUREKA	1400	128	212	254	399	154	132	94
HUMBOLDT	11820	1052	1828	2070	3518	1305	1173	873
LANDER	5260	545	866	1066	1606	502	395	279
LINCOLN	4290	457	749	760	1031	334	412	549
LYON	15240	1238	2393	2223	4080	1713	1844	1748
MINERAL	6290	464	1085	945	1635	739	743	676
NYE	13320	1048	1992	2297	3682	1533	1562	1203
PERSHING	3740	325	528	648	960	405	448	429
STOREY	1700	129	209	281	513	221	198	149
WASHOE	208320	12708	26994	39761	68022	22446	20744	17648
WHITE PINE	9310	762	1525	1349	2429	1082	1042	1123

YEAR=1983

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	917870	64362	134651	169247	287184	97933	89092	75398
CARSON CITY	34430	1993	4850	6041	10605	3621	3781	3562
CHURCHILL	14890	1167	2332	2601	3947	1465	1530	1848
CLARK	535150	38792	81328	100365	167799	56872	49417	40577
DOUGLAS	22200	1440	3157	3187	7669	2397	2576	1773
ELKO	20960	1682	3504	3633	6139	2109	2020	1873
ESMERRALDA	920	69	119	133	248	112	137	102
EUREKA	1420	131	214	255	404	156	134	95
HUMBOLDT	12000	1070	1856	2102	3571	1325	1191	886
LANDER	5550	575	913	1124	1696	530	416	295
LINCOLN	4460	474	780	790	1071	346	428	571
LYON	15960	1297	2504	2329	4273	1794	1931	1831
MINERAL	6210	459	1074	935	1614	730	735	669

Table 3b. Final version of age-specific population distribution for males, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	448611	31737	66537	83287	141835	48402	43279	33530
CARSON CITY	17253	993	2446	3145	5492	1794	1834	1548
CHURCHILL	7424	600	1148	1363	1967	714	773	862
CLARK	259739	18962	40088	49253	81606	27956	23785	18088
DOUGLAS	10898	720	1533	1482	3856	1177	1277	854
ELKO	10442	846	1725	1819	3075	1101	1038	841
ESMERRALDA	478	32	53	73	130	64	65	59
EUREKA	755	61	96	147	214	88	95	53
HUMBOLDT	8425	586	948	1110	1937	745	673	426
LANDER	2848	280	454	573	878	295	226	144
LINCOLN	2129	255	379	339	520	175	208	251
LYON	7691	495	1226	1123	2031	855	954	855
MINERAL	3189	222	541	507	842	370	379	332
NYE	7144	572	1044	1226	1971	869	837	624
PERSHING	1974	168	254	345	518	231	257	206
STOREY	868	64	120	130	265	107	109	72
WASHOE	104861	6442	13806	19969	35197	11373	10275	7802
WHITE PINE	4694	397	776	683	1257	541	529	511

YEAR=1983

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	464454	32859	68888	86230	146844	50111	44808	34713
CARSON CITY	17507	1009	2481	3192	5573	1820	1861	1571
CHURCHILL	7510	607	1159	1377	1990	722	782	872
CLARK	269891	19704	41656	51179	84797	29048	24714	18794
DOUGLAS	11295	745	1590	1535	3997	1219	1323	886
ELKO	11010	891	1819	1917	3241	1160	1093	886
ESMERRALDA	489	33	55	75	134	65	66	60
EUREKA	766	61	97	149	217	90	97	54
HUMBOLDT	8523	594	983	1127	1966	756	683	432
LANDER	3005	293	479	605	925	312	239	152
LINCOLN	2213	264	395	355	542	181	216	260
LYON	8054	518	1285	1176	2128	895	999	895
MINERAL	3148	220	533	499	831	366	375	328
NYE	8308	666	1215	1425	2292	1010	974	726
PERSHING	2016	172	258	382	527	236	262	210
STOREY	893	66	122	135	273	111	113	74
WASHOE	107151	6582	14106	20405	35965	11621	10499	7972
WHITE PINE	4936	416	817	720	1321	570	557	537

Table 3c. Final version of age-specific population distribution for females, by county, 1982-1983. Similiar data exist for previous years (1964 to 1981).

YEAR=1982

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	437949	30430	63522	80185	135553	46191	42773	39295
CARSON CITY	16677	951	2331	2807	4959	1775	1892	1962
CHURCHILL	7296	555	1159	1211	1935	734	739	964
CLARK	255281	18370	38181	47338	79880	26777	23773	20446
DOUGLAS	10522	671	1513	1399	3544	1136	1208	855
ELKO	9438	750	1599	1627	2748	900	878	936
ESMERRALDA	422	34	63	54	111	46	70	40
EUREKA	645	67	113	107	186	65	64	42
HUMBOLDT	5395	467	877	959	1580	560	500	447
LANDER	2412	266	411	493	730	207	169	137
LINCOLN	2161	202	369	419	508	159	204	299
LYON	7549	591	1166	1102	2049	859	890	893
MINERAL	3101	243	551	441	793	368	364	345
NYE	6176	475	947	1072	1711	665	724	579
PERSHING	1766	158	275	300	444	175	193	221
STOREY	832	63	92	152	247	113	89	76
WASHOE	103459	6265	13190	19790	32826	11074	10468	9845
WHITE PINE	4616	366	749	668	1170	540	513	611

YEAR=1983

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	453416	31505	65764	83018	140340	47822	44284	40683
CARSON CITY	16923	964	2366	2848	5032	1801	1920	1992
CHURCHILL	7380	561	1173	1224	1957	743	747	975
CLARK	265259	19088	39673	49188	83003	27824	24702	21246
DOUGLAS	10905	694	1568	1451	3673	1178	1253	887
ELKO	9950	790	1686	1716	2897	949	926	987
ESMERRALDA	431	36	66	57	113	48	71	42
EUREKA	654	68	114	107	187	66	65	42
HUMBOLDT	5477	475	894	974	1606	589	507	455
LANDER	2545	279	436	521	769	218	179	144
LINCOLN	2247	211	383	436	530	165	212	311
LYON	7906	618	1220	1154	2147	900	933	934
MINERAL	3062	239	541	436	784	364	360	341
NYE	7182	553	1103	1247	1990	773	842	675
PERSHING	1804	160	281	309	455	178	196	227
STOREY	857	67	95	156	255	117	91	77
WASHOE	105719	6403	13478	20223	33543	11316	10697	10060
WHITE PINE	4854	385	787	703	1232	568	539	643

Table 4 (page 1)

POPULATION OF RESIDENTS BY TOWNSHIP
NEVADA: 1968 - 1983

	Township	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Mean	S.D.
(1)	Carson City	13525	15144	15468	18300	20000	21801	23700	25300	25992	25803	27233	30183	32022	33637	33930	34430	24779	6740
(2)	New River	9516	10382	10513	11100	11500	11849	11900	12000	11992	12117	12506	13311	13917	14408	14720	14890	12289	1540
(3)	Bunkerville	234	268	244	258	266	308	321	331	345	379	459	495	492	533	567	642	384	125
	Goodsprings	281	321	314	344	385	431	482	529	622	720	835	945	1003	1115	1236	1338	681	343
	Henderson	15835	17107	16410	17001	17304	17794	18303	18618	19164	20766	22534	23985	24334	25118	26266	26918	20466	3680
	Las Vegas	170255	191125	191260	202267	210373	220697	232027	240849	253486	280345	311097	338040	350511	369782	395690	414206	273251	76973
	Logan	608	562	426	487	503	554	610	628	691	796	918	990	1087	1164	1236	1338	787	285
	Mesquite	655	723	674	717	710	739	739	761	760	834	876	945	922	970	979	1017	814	116
	Moapa	398	402	353	373	385	431	450	463	483	531	626	675	702	727	773	856	539	157
	Nelson	5426	5890	5674	5992	6212	6496	6807	7044	7355	8109	8972	9720	10059	10571	11279	11773	7961	2069
	N. Las Vegas	38500	49582	56241	57541	57858	58614	59500	59592	60462	64421	68771	71865	71605	72492	74369	74493	62244	9559
	Overton	1333	1419	1336	1376	1390	1416	1445	1455	1450	1554	1669	1755	1752	1794	1854	1873	1555	188
	Searchlight	327	375	356	373	385	400	417	430	449	493	542	585	620	630	670	696	484	118
(4)	East Fork	3444	3891	3867	4336	5051	5822	6517	7135	7884	9172	10764	12523	14053	15394	16191	17141	8949	4621
	Tahoe	2382	2858	3015	3164	3449	3716	3883	3965	4081	4414	4807	5180	5368	5415	5229	5059	4124	951
(5)	Carlin	1271	1365	1356	1308	1351	1376	1354	1301	1284	1224	1216	1263	1280	1284	1382	1409	1314	56
	East Line	90	97	97	117	147	178	205	226	254	274	304	352	395	438	519	581	267	149
	Elko	8369	8996	8931	8857	9399	9853	9978	9878	10051	9883	10135	10873	11398	11835	13200	13961	10350	1513
	Jackpot	0	0	0	65	137	214	288	356	433	496	578	696	809	921	1117	1274	461	395
	Jarbidge	29	32	32	32	32	34	32	32	32	30	31	31	33	34	36	38	33	2
	Mt. City	1055	1133	1125	1098	1148	1182	1178	1148	1149	1111	1119	1180	1216	1241	1360	1411	1178	90
	Tecoma	207	222	221	215	223	230	228	222	222	213	215	225	231	236	256	266	227	15
	Wells	2057	2212	2196	2106	2159	2184	2133	2035	1992	1895	1851	1902	1907	1890	2008	2018	2034	118
(6)	Esmeralda	546	561	629	600	500	704	700	700	771	730	830	862	777	809	900	920	721	124
(7)	Beowawe	349	380	401	373	365	406	387	416	405	356	382	381	400	406	443	436	393	26
	Eureka	503	534	547	527	535	618	613	684	691	631	703	731	798	843	957	984	681	145
(8)	Gold Run	251	245	238	263	292	336	377	426	463	528	606	704	780	860	1085	1156	538	291
	McDermitt	1054	1073	1086	1044	1014	1032	1030	1042	1019	1049	1090	1150	1159	1166	1340	1304	1103	95
	Paradise Valley	269	264	257	248	241	246	247	251	246	255	266	282	286	289	335	328	269	27
	Union	4728	4773	4794	4745	4753	4994	5147	5383	5453	5816	6270	6872	7209	7551	9061	9215	6048	1469

Table 4 (page 2)

(9)	Argenta	2025	2185	2252	2209	1965	2336	2419	2607	2836	2925	3123	3429	3640	3835	4748	5037	2973	913
	Austin	426	430	414	391	335	383	381	393	410	404	413	432	436	437	512	513	419	43
(10)	Alamo	352	376	398	392	425	466	535	617	682	845	969	1083	1126	1239	1420	1541	779	388
	Caliente	899	943	979	858	834	825	857	898	904	1025	1076	1104	1054	1067	1125	1125	973	105
	Panaca	482	512	539	483	481	487	519	559	578	674	728	769	758	792	865	896	633	143
	Pioche	602	624	641	568	559	559	589	626	639	735	784	817	794	818	880	898	696	116
(11)	Canal	1273	1361	1470	1707	1826	1997	2118	2209	2318	2335	2494	2999	3315	3607	3952	4245	2452	893
	Dayton	746	781	826	1128	1376	1676	1948	2196	2468	2642	2978	3759	4376	4912	5581	6197	2724	1706
	Mason Valley	4989	5058	5187	5566	5501	5554	5429	5212	5028	4647	4541	4982	5050	4935	4871	4687	5077	307
	Smith Valley	738	735	738	801	802	820	814	794	777	732	730	820	853	857	873	871	797	50
(12)	Hawthorne	5701	6051	5995	5514	5670	5815	5729	5547	5301	5051	4959	4956	5166	5261	5202	5124	5440	349
	Mina	485	513	506	471	489	507	505	494	477	459	456	460	484	498	498	495	487	18
	Schurz	508	548	550	515	540	565	566	558	543	526	526	535	567	587	590	591	551	25
(13)	Beatty	1152	1187	1131	1082	1126	1328	1468	1656	1872	2139	2605	2964	3524	3880	5688	6905	2482	1691
	Gabbs	964	1020	1000	837	766	798	782	782	785	797	861	868	912	884	1135	1200	899	128
	Pahrump	743	884	963	832	788	850	865	902	946	1006	1143	1217	1358	1406	1941	2223	1129	409
	Round Mt.	213	222	215	200	208	236	257	285	318	359	432	487	574	626	911	1098	415	260
	Tonopah	2304	2387	2290	1949	1816	1929	1929	1975	2032	2119	2359	2458	2680	2708	3644	4064	2415	607
(14)	Lake	2644	2656	2670	2600	2500	2559	2500	2700	2803	3119	3229	3356	3408	3532	3740	3820	2990	447
(15)	Virginia	634	696	695	700	700	881	900	1000	1053	1103	1167	1310	1503	1572	1700	1750	1085	369
(16)	Gerlach	707	679	579	581	574	588	582	566	556	551	568	585	583	568	542	532	584	44
	Reno	81397	89144	90502	93880	96596	100688	103970	105705	109082	113542	119923	130537	137542	143363	146449	148839	113197	21350
	Sparks	25464	28082	28702	30402	31933	33964	35787	37120	39073	41477	44658	49557	53230	56538	58850	60923	40985	11299
	Verdi	664	715	716	757	783	834	866	899	947	991	1069	1170	1256	1339	1375	1426	988	247
	Wadsworth	544	572	555	593	613	656	681	711	752	787	852	932	1012	1075	1104	1149	787	202
(17)	Baker	104	131	146	156	172	179	190	204	209	186	198	206	212	225	263	289	192	45
	Ely	6927	8647	9686	9519	9780	9473	9448	9518	9208	7758	7828	7752	7599	7688	8618	9040	8656	898
	Lund	267	306	318	325	348	350	362	378	379	330	344	352	356	371	429	463	355	45
	State	23041	25526	25981	29400	31500	33650	35600	37300	37984	37920	39739	43494	45939	48045	48650	49320	37068	8254

S.D. = Standard Deviation

( ) = Reflect the county codes in Table 2

Table 5a. Race-specific population distribution for both sexes, by county, during the time interval between 1980 to 1983. Similar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	3012291	219354	56797	154601	3443043
CARSON CITY	122940	1829	6181	3068	134019
CHURCHILL	52677	395	2755	2106	57935
CLARK	1686932	199640	12919	98663	1998154
DOUGLAS	80897	146	1490	1317	83850
ELKO	64890	356	6442	4299	75987
ESMERRALDA	3191	0	88	127	3406
EUREKA	4893	0	163	211	5267
HUMBOLDT	35632	165	3012	4309	43119
LANDER	17442	0	620	1095	19158
LINCOLN	15453	0	286	658	16398
LYON	55388	74	2287	1325	59074
MINERAL	19866	1549	2596	1052	25063
NYE	44044	288	1843	1188	47362
PERSHING	13070	0	800	629	14500
STOREY	6242	0	157	126	6525
WASHOE	755047	15000	14261	33366	817675
WHITE PINE	33157	0	988	1406	35551

Table 5b. Race-specific population distribution for males, by county, during the time interval between 1980 to 1983. Similar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	1526191	110080	28233	77722	1742225
CARSON CITY	62000	1359	3101	1686	68147
CHURCHILL	26672	245	1319	982	29220
CLARK	854638	99147	6441	47497	1007725
DOUGLAS	41150	78	747	686	42661
ELKO	33868	242	3230	2574	39914
ESMERRALDA	1684	0	44	83	1810
EUREKA	2648	0	79	114	2841
HUMBOLDT	19210	78	1513	2637	23438
LANDER	9423	0	282	667	10373
LINCOLN	7689	0	150	298	8137
LYON	27816	39	1165	791	29811
MINERAL	10054	838	1283	533	12706
NYE	23666	173	973	591	25403
PERSHING	6880	0	361	413	7653
STOREY	3217	0	82	30	3330
WASHOE	379160	7932	6980	17517	411589
WHITE PINE	16599	0	540	788	17925

Table 5c. Race-specific population distribution for females, by county, during the time interval between 1980 to 1983. Similar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979.)

COUNTY	WHITE	BLACK	INDIAN	OTHERS	TOTAL
STATE TOTAL	1486101	109275	28564	76879	1700818
CARSON CITY	60941	469	3080	1382	65872
CHURCHILL	26005	150	1436	1125	28715
CLARK	832293	100493	6477	51165	990429
DOUGLAS	39747	69	743	630	41189
ELKO	31022	115	3212	1725	36073
ESMERRALDA	1507	0	44	44	1596
EUREKA	2247	0	84	97	2426
HUMBOLDT	16422	87	1499	1674	19681
LANDER	8019	0	338	427	8785
LINCOLN	7764	0	137	360	8261
LYON	27572	34	1121	534	29263
MINERAL	9813	710	1315	521	12357
NYE	20378	115	868	597	21959
PERSHING	6191	0	438	217	6847
STOREY	3026	0	74	96	3195
WASHOE	375887	7069	7280	15849	406086
WHITE PINE	16558	0	447	618	17626

Table 6a. Age-specific population distribution for both sexes, by county, during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	YEAR*							
	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	3443043	241432	505097	634866	1077263	367360	334196	282826
CARSON CITY	134019	7761	18870	23513	41280	14096	14720	13867
CHURCHILL	57935	4543	9074	10120	15358	5699	5953	7190
CLARK	1998154	144841	303685	374749	626529	212351	184513	151505
DOUGLAS	83850	5440	11928	12037	28967	9053	9731	6693
ELKO	75987	6098	12703	13170	22257	7647	7322	6790
ESMERRALDA	3406	254	439	491	917	416	508	378
EUREKA	5267	484	797	951	1502	580	496	352
HUMBOLDT	43119	3840	6668	7552	12833	4762	4279	3186
LANDER	19158	1984	3153	3882	5852	1829	1438	1019
LINCOLN	16398	1744	2866	2906	3939	1274	1574	2099
LYON	59074	4799	9273	8620	15817	6640	7148	6776
MINERAL	25063	1851	4328	3769	6512	2944	2963	2696
NYE	47362	3727	7088	8166	13092	5453	5555	4280
PERSHING	14500	1260	2049	2803	3722	1570	1740	1658
STOREY	6525	493	806	1082	1969	847	759	569
WASHOE	817675	49878	105953	156063	266991	88104	81421	69268
WHITE PINE	35551	2912	5821	5152	9273	4132	3978	4284

Table 6b. Age-specific population distribution for males, by county, during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

	YEAR*							
COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
STATE TOTAL	1742225	123256	258405	323457	550828	187973	168080	130217
CARSON CITY	68147	3924	9659	12424	21693	7085	7244	6114
CHURCHILL	29220	2360	4508	5382	7743	2809	3043	3393
CLARK	1007725	73569	155536	191091	316815	108462	92278	70175
DOUGLAS	*42661*	*2816*	*6001*	*5800*	15095	4607	4999	3343
ELKO	39914	3232	6592	6951	11752	4206	3965	3212
ESMERRALDA	1810	121	200	277	494	241	245	223
EUREKA	2841	228	362	551	805	334	360	198
HUMBOLDT	23438	2135	3460	4050	7065	2718	2454	1554
LANDER	10373	1015	1654	2086	3197	1076	823	523
LINCOLN	8137	972	1454	1299	1991	667	795	958
LYON	29811	1918	4754	4352	7874	3312	3698	3315
MINERAL	12706	887	2150	2014	3352	1476	1512	1324
NYE	25403	2036	3716	4357	7008	3088	2978	2220
PERSHING	7653	651	982	1336	2000	894	996	799
STOREY	3330	247	458	501	1016	412	421	276
WASHOE	411589	25284	54186	78380	138149	44638	40330	30624
WHITE PINE	17925	1514	2965	2609	4799	2068	2021	1951

Table 6c. Age-specific population distribution for females, by county, during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	YR_ALL	LE_5	YR5_14	YR15_24	YR25_44	YR45_54	YR55_64	GE_65
				YEAR				
STATE TOTAL	1700818	118176	246692	311407	526434	179387	166115	152605
CARSON CITY	65872	3754	9207	11086	19586	7011	7474	7751
CHURCHILL	28715	2183	4562	4764	7614	2890	2908	3796
CLARK	990429	71272	148132	183658	309916	103889	92234	79328
DOUGLAS	41189	2625	5926	5479	13873	4448	4731	3350
ELKO	36073	2865	6112	6220	10503	3441	3357	3579
ESMERRALDA	1596	131	239	208	420	176	263	153
EUREKA	2426	254	426	399	697	245	241	155
HUMBOLDT	19681	1705	3209	3500	5767	2044	1824	1632
LANDER	8785	966	1500	1798	2657	753	617	498
LINCOLN	8261	774	1410	1602	1946	607	778	1143
LYON	29263	2289	4520	4272	7944	3330	3451	3458
MINERAL	12357	965	2185	1758	3161	1467	1452	1374
NYE	21959	1690	3372	3810	6084	2365	2575	2061
PERSHING	8847	609	1068	1187	1724	677	746	860
STOREY	3195	246	352	581	951	434	340	290
WASHOE	406086	24594	51769	77681	128845	43467	41089	38642
WHITE PINE	17626	1398	2858	2550	4471	2062	1959	2335

Table 7

Deaths of Residents by Township

Nevada: 1968-1983

	Township	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Mean	S.D.
(1)	Carson City	121	133	119	124	122	148	131	149	164	189	251	242	274	240	327	285	189	68
(2)	New River	103	77	108	103	94	96	100	122	128	136	118	128	143	157	126	155	118	22
(3)	Bunkerville	1	2	1	2	2	2	2	2	2	3	3	3	3	3	4	4	2	1
	Goodsprings	1	2	2	2	2	3	3	2	5	7	7	6	7	7	9	9	5	3
	Henderson	91	101	103	105	109	115	117	118	130	140	143	153	169	167	183	183	133	30
	Las Vegas	1100	1132	1195	1248	1310	1424	1477	1522	1718	1885	1959	2152	2417	2443	2755	2802	1784	561
	Logan	0	0	0	0	0	0	0	3	3	3	1	0	0	0	0	0	1	1
	Mesquite	2	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	5	1
	Moapa	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5	6	3	1
	Nelson	40	43	55	46	48	59	57	39	57	70	83	88	96	92	91	81	65	20
	N. Las Vegas	191	290	348	355	360	377	379	377	408	432	432	456	492	477	517	503	400	82
	Overton	3	0	0	0	0	0	1	9	3	6	7	2	0	0	0	13	3	4
	Searchlight	0	0	1	0	0	0	0	3	4	2	4	1	0	0	0	0	1	1
(4)	East Fork	19	27	22	31	24	24	32	33	53	52	71	70	91	67	80	80	49	24
	Tahoe	13	20	18	23	16	15	19	19	28	25	32	29	35	23	26	23	23	6
(5)	Carlin	11	10	12	9	10	13	9	12	13	11	11	11	11	11	9	8	11	1
	East Line	1	1	1	1	1	2	1	3	3	3	3	3	4	4	4	3	2	1
	Elko	75	71	81	64	72	90	66	85	105	87	95	99	104	105	93	79	86	13
	Jackpot	0	0	0	0	1	2	2	3	5	5	5	6	7	8	8	7	4	3
	Jarbidge	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Mt. City	0	0	0	0	0	0	1	4	8	5	5	3	7	6	6	2	3	3
	Tecoma	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0
	Wells	18	16	20	15	17	20	14	15	21	15	17	17	16	17	14	11	16	2
(6)	Esmeralda	5	6	7	5	7	8	7	8	9	9	8	13	11	10	13	9	8	2
(7)	Beowawe	3	5	2	4	3	2	4	3	3	3	0	3	3	2	3	2	3	1
	Eureka	10	6	6	5	4	7	6	6	6	5	4	6	5	4	7	3	6	2
(8)	Gold Run	3	3	2	3	4	3	4	4	5	5	4	5	6	6	8	6	4	2
	McDermitt	11	12	11	13	14	9	10	10	11	10	8	9	9	9	9	7	10	2
	Paradise Valley	3	3	2	3	3	2	2	3	3	2	2	2	2	2	2	2	2	0
	Union	47	53	47	59	66	45	50	51	56	53	46	52	55	57	63	51	53	6
(9)	Argenta	18	17	13	25	17	18	18	17	14	27	18	20	25	28	23	23	20	4
	Austin	9	5	5	4	3	3	5	3	2	4	2	2	3	3	2	2	4	2
(10)	Alamo	3	5	2	5	5	4	2	6	6	5	8	8	11	9	9	8	6	2
	Caliente	7	12	6	11	11	7	4	12	15	9	16	8	11	8	5	7	9	3
	Panaca	4	7	3	6	6	4	2	6	7	5	6	6	8	6	5	5	5	1
	Pioche	5	8	4	7	7	5	3	6	5	4	5	6	8	6	5	5	6	1
(11)	Canal	9	13	12	15	18	17	18	16	19	21	24	29	34	28	37	36	22	8
	Dayton	5	8	7	10	14	15	17	16	20	24	29	36	45	38	53	52	24	15
	Mason Valley	35	49	43	49	55	48	47	39	41	42	44	48	52	38	46	39	45	5
	Smith Valley	5	7	6	7	8	7	7	6	6	7	7	8	9	7	8	7	7	1
(12)	Hawthorne	55	49	45	75	58	58	51	40	41	53	40	44	49	62	43	59	51	9
	Mina	5	4	4	6	5	5	5	4	4	8	5	4	5	6	4	6	5	1
	Schurz	5	6	4	7	5	6	5	4	4	5	5	5	5	7	5	7	5	1
(13)	Beatty	10	8	14	11	9	9	17	13	8	18	21	35	42	44	39	49	22	14
	Gabbs	8	7	13	8	6	5	9	7	4	7	7	10	11	10	8	9	8	2
	Pahrump	6	6	12	8	7	6	10	9	6	10	10	14	16	16	13	16	10	4
	Round Mt.	2	2	3	2	2	2	3	3	1	3	3	6	7	7	6	8	4	2
	Tonopah	28	33	26	16	16	19	24	25	22	22	20	25	28	29	22	25	24	4
(14)	Lake	34	37	36	37	34	47	27	34	35	36	40	36	45	30	25	39	36	5
(15)	Virginia	17	8	12	9	11	12	6	10	9	15	11	2	12	6	11	14	12	4
(16)	Gerlach	5	4	5	5	5	5	5	4	5	5	5	5	5	4	4	4	5	0
	Reno	716	726	722	733	822	766	809	855	905	919	938	973	995	1026	1032	1020	872	115
	Sparks	215	205	233	244	282	268	288	293	335	343	356	375	397	412	429	432	319	74
	Verdi	5	4	6	6	7	7	7	7	9	8	9	9	10	10	11	11	8	2
	Wadsworth	4	3	5	5	6	6	6	6	6	7	7	7	8	8	9	9	6	2
(17)	Baker	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	2	1
	Ely	57	72	86	88	67	66	79	76	89	80	79	80	79	94	90	82	79	9
	Lund	3	3	3	3	2	2	3	3	4	3	3	4	4	5	4	4	3	1
	State	3149	3331	3504	3635	3789	3895	3984	4134	4585	4865	5052	5400	5906	5881	6321	6324	4610	1055

Data of unknown township were not included.

S.D. = Standard Deviation.

( ) = Reflect the county codes.

Table 8a. Frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
LARYNX	8	8	0.122	0.122
MELANOMA	1	9	0.015	0.138
BREAST	42	51	0.642	0.779
STOMACH	24	75	0.367	1.146
ESOPHAGUS	24	99	0.367	1.513
BRAIN	10	109	0.153	1.666
OTHER CA.	549	658	8.389	10.055
ARI	33	691	0.504	10.559
BRONCHITIS	39	730	0.596	11.155
EMPHYSEMA	107	837	1.635	12.790
ASTHMA	20	857	0.306	13.096
HYPERTENSIVE HD	4	861	0.061	13.157
HYPER. H & RENAL	6	867	0.092	13.249
ACUTE MI	7	874	0.107	13.356
OTHER ISCHEMIC	2	876	0.031	13.386
OTHER HD	895	1771	13.677	27.063
HYPER. W OR /WO	18	1789	0.275	27.338
SUBARACHNOID HE	2	1791	0.031	27.369
CVA	357	2148	5.455	32.824
ILL-DEFINED	28	2176	0.428	33.252
ATHEROSCLEROSIS	1	2177	0.015	33.267
OTHER VESSELS	103	2280	1.574	34.841
ADJUST. DISORDER	1	2281	0.015	34.856
LO GA/BW	30	2311	0.458	35.315
MALFORMATION	51	2362	0.779	36.094
ALL OTHERS	4182	6544	63.906	100.000

Table 8b. Frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
	1	.	.	.
LARYNX	5	5	0.027	0.027
BREAST	292	297	1.549	1.575
ESOPHAGUS	70	367	0.371	1.947
BRAIN	69	436	0.366	2.313
OTHER CA.	1640	2076	8.698	11.011
ARI	30	2106	0.159	11.170
BRONCHITIS	38	2144	0.202	11.372
EMPHYSEMA	411	2555	2.180	13.552
ASTHMA	31	2586	0.164	13.716
OTHER AWO	12	2598	0.064	13.780
HYPERTENSIVE HD	49	2647	0.260	14.039
HYPER. H & RENAL	59	2706	0.313	14.352
ACUTE MI	3	2709	0.016	14.368
OLD INFARCTION	6	2715	0.032	14.400
OTHER ISCHEMIC	8	2723	0.042	14.443
OTHER HD	606	3329	3.214	17.657
HYPER. W OR /WO	54	3383	0.286	17.943
SUBARACHNOID HE	2	3385	0.011	17.954
CVA	1544	4929	8.189	26.143
ILL-DEFINED	297	5226	1.575	27.718
ATHEROSCLEROSIS	2	5228	0.011	27.729
OTHER VESSELS	232	5460	1.231	28.959
LO GA/BW	217	5677	1.151	30.110
MALFORMATION	132	5809	0.700	30.810
ALL OTHERS	13045	18854	69.190	100.000

Table 8c. *Frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)*

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
	14	.	.	.
TRACHEA,LUNG	1	1	0.004	0.004
BREAST	404	405	1.682	1.686
ESOPHAGUS	72	477	0.300	1.986
BRAIN	70	547	0.291	2.277
OTHER CA.	2196	2743	9.142	11.420
ARI	6	2749	0.025	11.445
BRONCHITIS	49	2798	0.204	11.649
EMPHYSEMA	348	3146	1.449	13.097
ASTHMA	25	3171	0.104	13.201
OTHER AWO	145	3316	0.604	13.805
PNEUMOCONIOSIS	3	3319	0.012	13.818
EXT. AGENT	4	3323	0.017	13.834
HYPERTENSIVE HD	28	3351	0.117	13.951
HYPER. H & RENAL	16	3367	0.067	14.017
ACUTE MI	607	3974	2.527	16.545
OTHER ISCHEMIC	19	3993	0.079	16.624
OTHER HD	1134	5127	4.721	21.345
HYPER. W OR /WO	23	5150	0.096	21.440
SUBARACHNOID HE	13	5163	0.054	21.495
CVA	1427	6590	5.941	27.435
ILL-DEFINED	507	7097	2.111	29.546
OTHER VESSELS	277	7374	1.153	30.699
LO GA/BW	39	7413	0.162	30.862
MALFORMATION	175	7588	0.729	31.590
ALL OTHERS	16432	24020	68.410	100.000

Table 8d. Frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
	15	.	.	.
BREAST	420	420	1.718	1.718
COLON	1	421	0.004	1.723
OTHER CA.	2404	2825	9.836	11.558
ARI	2	2827	0.008	11.567
BRONCHITIS	34	2861	0.139	11.706
EMPHYSEMA	249	3110	1.019	12.725
OTHER AWO	778	3888	3.183	15.908
PNEUMOCONIOSIS	5	3893	0.020	15.928
EXT. AGENT	43	3936	0.176	16.104
ACUTE MI	2587	6523	10.585	26.689
OLD INFARCTION	10	6533	0.041	26.730
OTHER ISCHEMIC	63	6596	0.258	26.987
OTHER HD	2543	9139	10.405	37.392
SUBARACHNOID HE	68	9207	0.278	37.670
CVA	1338	10545	5.474	43.145
ILL-DEFINED	128	10673	0.524	43.668
OTHER VESSELS	228	10901	0.933	44.601
MALFORMATION	180	11081	0.736	45.338
ALL OTHERS	13360	24441	54.662	100.000

Table 8e. Frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
LARYNX	7	7	0.171	0.171
STOMACH	10	17	0.244	0.415
ESOPHAGUS	17	34	0.415	0.830
BRAIN	8	42	0.195	1.025
OTHER CA.	275	317	6.711	7.735
ARI	16	333	0.390	8.126
BRONCHITIS	18	351	0.439	8.565
EMPHYSEMA	86	437	2.099	10.664
ASTHMA	12	449	0.293	10.957
HYPERTENSIVE HD	1	450	0.024	10.981
HYPER. H & RENAL	1	451	0.024	11.005
ACUTE MI	4	455	0.098	11.103
OTHER HD	601	1056	14.666	25.769
HYPER. W OR /WO	11	1067	0.268	26.037
SUBARACHNOID HE	2	1069	0.049	26.086
CVA	188	1257	4.588	30.673
ILL-DEFINED	12	1269	0.293	30.966
ATHEROSCLEROSIS	1	1270	0.024	30.991
OTHER VESSELS	58	1328	1.415	32.406
ADJUST. DISORDER	1	1329	0.024	32.430
LO GA/BW	19	1348	0.464	32.894
MALFORMATION	26	1374	0.634	33.529
ALL OTHERS	2724	4098	66.471	100.000

Table 8f. Frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
.	1	.	.	.
2	4	4	0.035	0.035
6	2	6	0.017	0.052
9	46	52	0.398	0.450
10	39	91	0.338	0.788
11	928	1019	8.037	8.826
12	18	1037	0.156	8.981
13	26	1063	0.225	9.207
14	329	1392	2.849	12.056
15	11	1403	0.095	12.151
16	8	1411	0.069	12.221
19	23	1434	0.199	12.420
20	24	1458	0.208	12.628
21	2	1460	0.017	12.645
22	4	1464	0.035	12.680
23	5	1469	0.043	12.723
24	354	1823	3.066	15.789
25	30	1853	0.260	16.049
26	1	1854	0.009	16.058
27	764	2618	6.617	22.675
28	148	2766	1.282	23.956
29	1	2767	0.009	23.965
30	150	2917	1.299	25.264
35	138	3055	1.195	26.459
36	64	3119	0.554	27.014
37	8427	11546	72.986	100.000

Table 8g. Frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
.	10	.	.	.
3	1	1	0.007	0.007
6	5	6	0.034	0.041
9	57	63	0.387	0.428
10	36	99	0.244	0.672
11	1250	1349	8.483	9.154
12	3	1352	0.020	9.175
13	33	1385	0.224	9.399
14	251	1636	1.703	11.102
15	7	1643	0.048	11.150
16	96	1739	0.651	11.801
17	2	1741	0.014	11.815
18	2	1743	0.014	11.828
19	16	1759	0.109	11.937
20	6	1765	0.041	11.977
21	415	2180	2.816	14.794
23	12	2192	0.081	14.875
24	662	2854	4.492	19.368
25	8	2862	0.054	19.422
26	6	2868	0.041	19.463
27	700	3568	4.750	24.213
28	230	3798	1.561	25.774
30	182	3980	1.235	27.009
35	20	4000	0.136	27.144
36	103	4103	0.699	27.843
37	10633	14736	72.157	100.000

Table 8h. Frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
.	10	.	.	.
BREAST	3	3	0.021	0.021
COLON	1	4	0.007	0.028
OTHER CA.	1376	1380	9.526	9.553
ARI	2	1382	0.014	9.567
BRONCHITIS	14	1396	0.097	9.664
EMPHYSEMA	171	1567	1.184	10.848
OTHER AWO	491	2058	3.399	14.247
PNEUMOCONIOSIS	5	2063	0.035	14.282
EXT. AGENT	25	2088	0.173	14.455
ACUTE MI	1745	3833	12.080	26.535
OLD INFARCTION	9	3842	0.062	26.597
OTHER ISCHEMIC	40	3882	0.277	26.874
OTHER HD	1452	5334	10.052	36.926
SUBARACHNOID HE	28	5362	0.194	37.120
CVA	592	5954	4.098	41.218
ILL-DEFINED	55	6009	0.381	41.599
OTHER VESSELS	152	6161	1.052	42.651
MALFORMATION	106	6267	0.734	43.385
ALL OTHERS	8178	14445	56.615	100.000

Table 8i. Frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
LARYNX	1	1	0.041	0.041
MELANOMA	1	2	0.041	0.082
BREAST	42	44	1.722	1.804
STOMACH	14	58	0.574	2.378
ESOPHAGUS	7	65	0.287	2.665
BRAIN	2	67	0.082	2.747
OTHER CA.	274	341	11.234	13.981
ARI	17	358	0.697	14.678
BRONCHITIS	21	379	0.861	15.539
EMPHYSEMA	21	400	0.861	16.400
ASTHMA	8	408	0.328	16.728
HYPERTENSIVE HD	3	411	0.123	16.851
HYPER. H & RENAL	5	416	0.205	17.056
ACUTE MI	3	419	0.123	17.179
OTHER ISCHEMIC	2	421	0.082	17.261
OTHER HD	291	712	11.931	29.192
HYPER. W OR /WO	7	719	0.287	29.479
CVA	169	888	6.929	36.408
ILL-DEFINED	16	904	0.656	37.064
OTHER VESSELS	45	949	1.845	38.909
LO GA/BW	11	960	0.451	39.360
MALFORMATION	25	985	1.025	40.385
ALL OTHERS	1454	2439	59.615	100.000

Table 8j. Frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
LARYNX	1	1	0.014	0.014
BREAST	290	291	3.968	3.982
ESOPHAGUS	24	315	0.328	4.310
BRAIN	30	345	0.411	4.721
OTHER CA.	712	1057	9.743	14.464
ARI	12	1069	0.164	14.628
BRONCHITIS	12	1081	0.164	14.792
EMPHYSEMA	82	1163	1.122	15.914
ASTHMA	20	1183	0.274	16.188
OTHER AWO	4	1187	0.055	16.242
HYPERTENSIVE HD	26	1213	0.356	16.598
HYPER. H & RENAL	35	1248	0.479	17.077
ACUTE MI	1	1249	0.014	17.091
OLD INFARCTION	2	1251	0.027	17.118
OTHER ISCHEMIC	3	1254	0.041	17.159
OTHER HD	252	1506	3.449	20.608
HYPER. W OR /WO	24	1530	0.328	20.936
SUBARACHNOID HE	1	1531	0.014	20.950
CVA	780	2311	10.673	31.623
ILL-DEFINED	149	2460	2.039	33.662
ATHEROSCLEROSIS	1	2461	0.014	33.675
OTHER VESSELS	82	2543	1.122	34.797
LO GA/BW	79	2622	1.081	35.878
MALFORMATION	68	2690	0.930	36.809
ALL OTHERS	4618	7308	63.191	100.000

Table 8k. Frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
	4	.	.	.
BREAST	399	399	4.299	4.299
ESOPHAGUS	15	414	0.162	4.461
BRAIN	34	448	0.366	4.827
OTHER CA.	946	1394	10.193	15.020
ARI	3	1397	0.032	15.052
BRONCHITIS	16	1413	0.172	15.225
EMPHYSEMA	97	1510	1.045	16.270
ASTHMA	18	1528	0.194	16.464
OTHER AWO	49	1577	0.528	16.992
PNEUMOCONIOSIS	1	1578	0.011	17.002
EXT. AGENT	2	1580	0.022	17.024
HYPERTENSIVE HD	12	1592	0.129	17.153
HYPER. H & RENAL	10	1602	0.108	17.261
ACUTE MI	191	1793	2.058	19.319
OTHER ISCHEMIC	7	1800	0.075	19.394
OTHER HD	472	2272	5.086	24.480
HYPER. W OR /WO	15	2287	0.162	24.642
SUBARACHNOID HE	7	2294	0.075	24.717
CVA	727	3021	7.833	32.550
ILL-DEFINED	277	3298	2.985	35.535
OTHER VESSELS	95	3393	1.024	36.559
LO GA/BW	19	3412	0.205	36.763
MALFORMATION	72	3484	0.776	37.539
ALL OTHERS	5797	9281	62.461	100.000

Table 8l. Frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

ILL	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
	5	.	.	.
BREAST	417	417	4.174	4.174
OTHER CA.	1028	1445	10.289	14.463
BRONCHITIS	20	1465	0.200	14.663
EMPHYSEMA	78	1543	0.781	15.444
OTHER AWO	287	1830	2.873	18.316
EXT. AGENT	18	1848	0.180	18.497
ACUTE MI	842	2690	8.428	26.924
OLD INFARCTION	1	2691	0.010	26.934
OTHER ISCHEMIC	23	2714	0.230	27.164
OTHER HD	1091	3805	10.920	38.084
SUBARACHNOID HE	40	3845	0.400	38.485
CVA	746	4591	7.467	45.951
ILL-DEFINED	73	4664	0.731	46.682
OTHER VESSELS	76	4740	0.761	47.443
MALFORMATION	72	4812	0.721	48 163
ALL OTHERS	5179	9991	51.837	100.000

Table 9a. Final version of frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	658	658	10.055	10.055
RESPIRA- TORY	199	857	3.041	13 096
HEART	914	1771	13.967	27.063
HYPER- TENSION	18	1789	0.275	27.338
CVA	387	2176	5.914	33.252
ATHEROSCLEROSIS	1	2177	0.015	33.267
OTHER VESSELS	103	2280	1.574	34.841
STRESS/ EMOTION	1	2281	0.015	34.856
REPRO DUCTION	30	2311	0.458	35.315
MALFOR- MATION	51	2362	0.779	36.094
OTHERS	4182	6544	63.906	100.000

Table 9b. Final version of frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

OR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2076	2076	11.010	11.010
RESPIRA- TORY	522	2598	2.768	13.779
HEART	731	3329	3.877	17.656
HYPER- TENSION	54	3383	0.286	17.942
CVA	1843	5226	9.775	27.717
ATHEROSCLEROSIS	2	5228	0.011	27.727
OTHER VESSELS	232	5460	1.230	28.958
REPRO DUCTION	217	5677	1.151	30.109
MALFOR- MATION	132	5809	0.700	30.809
OTHERS	13046	18855	69.191	100.000

Table 9c. Final version of frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2743	2743	11.413	11.413
RESPIRA- TORY	580	3323	2.413	13.826
HEART	1804	5127	7.506	21.332
HYPER- TENSION	23	5150	0.096	21.428
CVA	1947	7097	8.101	29.529
OTHER VESSELS	277	7374	1.153	30.682
REPRO DUCTION	39	7413	0.162	30.844
MALFOR- MATION	175	7588	0.728	31.572
OTHERS	16446	24034	68.428	100.000

Table 9d. Final version of frequency and percentage distributions for cause-specific deaths for both sexes in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2825	2825	11.551	11.551
RESPIRA- TORY	1111	3936	4.543	16.094
HEART	5203	9139	21.275	37.369
CVA	1534	10673	6.272	43.642
OTHER VESSELS	228	10901	0.932	44.574
MALFOR- MATION	180	11081	0.736	45.310
OTHERS	13375	24456	54.690	100.000

Table 9e. Final version of frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	317	317	7.735	7.735
RESPIRA- TORY	132	449	3.221	10.957
HEART	607	1056	14.812	25.769
HYPER- TENSION	11	1067	0.268	26.037
CVA	202	1269	4.929	30.966
ATHEROSCLEROSIS	1	1270	0.024	30.991
OTHER VESSELS	58	1328	1.415	32.406
STRESS/ EMOTION	1	1329	0.024	32.430
REPRO DUCTION	19	1348	0.464	32.894
MALFOR- MATION	26	1374	0.634	33.529
OTHERS	2724	4098	66.471	100.000

Table 9f. Final version of frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2076	2076	11.010	11.010
RESPIRA- TORY	522	2598	2.768	13.779
HEART	731	3329	3.877	17.656
HYPER- TENSION	54	3383	0.286	17.942
CVA	1843	5226	9.775	27.717
ATHEROSCLEROSIS	2	5228	0.011	27.727
OTHER VESSELS	232	5460	1.230	28.958
REPRO DUCTION	217	5677	1.151	30.109
MALFOR- MATION	132	5809	0.700	30.809
OTHERS	13046	18855	69.191	100.000

Table 9g. Final version of frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2743	2743	11.413	11.413
RESPIRA- TORY	580	3323	2.413	13.826
HEART	1804	5127	7.506	21.332
HYPER- TENSION	23	5150	0.096	21.428
CVA	1947	7097	8.101	29.529
OTHER VESSELS	277	7374	1.153	30.682
REPRO DUCTION	39	7413	0.162	30.844
MALFOR- MATION	175	7588	0.728	31.572
OTHERS	16446	24034	68.428	100.000

Table 9h. Final version of frequency and percentage distributions for cause-specific deaths for males in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2825	2825	11.551	11.551
RESPIRA- TORY	1111	3936	4.543	16.094
HEART	5203	9139	21.275	37.369
CVA	1534	10673	6.272	43.642
OTHER VESSELS	228	10901	0.932	44.574
MALFOR- MATION	180	11081	0.736	45.310
OTHERS	13375	24456	54.690	100.000

Table 9i. Final version of frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	341	341	13.981	13.981
RESPIRA- TORY	67	408	2.747	16.728
HEART	304	712	12.464	29.192
HYPER- TENSION	7	719	0.287	29.479
CVA	185	904	7.585	37.064
OTHER VESSELS	45	949	1.845	38.909
REPRO DUCTION	11	960	0.451	39.360
MALFOR- MATION	25	985	1.025	40.385
OTHERS	1454	2439	59.615	100.000

Table 9j. Final version of frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2076	2076	11.010	11.010
RESPIRA- TORY	522	2598	2.768	13.779
HEART	731	3329	3.877	17.656
HYPER- TENSION	54	3383	0.286	17.942
CVA	1843	5226	9.775	27.717
ATHEROSCLEROSIS	2	5228	0.011	27.727
OTHER VESSELS	232	5460	1.230	28.958
REPRO DUCTION	217	5677	1.151	30.109
MALFOR- MATION	132	5809	0.700	30.809
OTHERS	13046	18855	69.191	100.000

Table 9k. Final version of frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2743	2743	11.413	11.413
RESPIRA- TORY	580	3323	2.413	13.826
HEART	1804	5127	7.506	21.332
HYPER- TENSION	23	5150	0.096	21.428
CVA	1947	7097	8.101	29.529
OTHER VESSELS	277	7374	1.153	30.682
REPRO DUCTION	39	7413	0.162	30.844
MALFOR- MATION	175	7588	0.728	31.572
OTHERS	16446	24034	68.428	100.000

Table 9l. Final version of frequency and percentage distributions for cause-specific deaths for females in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

GR	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
CANCER	2825	2825	11.551	11.551
RESPIRA- TORY	1111	3936	4.543	16.094
HEART	5203	9139	21.275	37.369
CVA	1534	10673	6.272	43.642
OTHER VESSELS	228	10901	0.932	44.574
MALFOR- MATION	180	11081	0.736	45.310
OTHERS	13375	24456	54.690	100.000

Table 10a. Frequency and percentage distributions for age-specific deaths for both sexes in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		354	.	.	.
UNDER 5		440	440	7.108	7.108
5-14	YEARS	92	532	1.486	8.595
15-24	YEARS	184	716	2.973	11.567
25-44	YEARS	550	1266	8.885	20.452
45-54	YEARS	713	1979	11.519	31.971
55-64	YEARS	1109	3088	17.916	49.887
65 AND	OVER	3097	6185	50.032	99.919
UNKNOWN		5	6190	0.081	100.000

Table 10b. Frequency and percentage distributions for age-specific deaths for both sexes in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		900			
UNDER 5		1037	1037	5.776	5.776
5-14	YEARS	208	1245	1.158	6.934
15-24	YEARS	620	1865	3.453	10.387
25-44	YEARS	1516	3381	8.443	18.830
45-54	YEARS	1926	5307	10.727	29.557
55-64	YEARS	3270	8577	18.212	47.769
65 AND	OVER	9341	17918	52.025	99.794
UNKNOWN		37	17955	0.206	100.000

Table 10c. Frequency and percentage distributions for age-specific deaths for both sexes in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		1107			
UNDER 5		842	842	3.673	3.673
5-14	YEARS	206	1048	0.899	4.571
15-24	YEARS	916	1964	3.995	8.566
25-44	YEARS	1994	3958	8.697	17.263
45-54	YEARS	2166	6124	9.447	26.711
55-64	YEARS	4205	10329	18.341	45.052
65 AND	OVER	12570	22899	54.826	99.878
UNKNOWN		28	22927	0.122	100.000

Table 10d. Frequency and percentage distributions for age-specific deaths for both sexes in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		1093			
UNDER 5		729	729	3.120	3.120
5-14	YEARS	155	884	0.663	3.784
15-24	YEARS	799	1683	3.420	7.204
25-44	YEARS	2122	3805	9.083	16.286
45-54	YEARS	1925	5730	8.240	24.526
55-64	YEARS	4020	9750	17.207	41.733
65 AND	OVER	13573	23323	58.096	99.829
UNKNOWN		40	23363	0.171	100.000

Table 10e. Frequency and percentage distributions for age-specific deaths for males in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		250			
UNDER 5		271	271	7.043	7.043
5-14	YEARS	60	331	1.559	8.602
15-24	YEARS	134	465	3.482	12.084
25-44	YEARS	345	810	8.966	21.050
45-54	YEARS	447	1257	11.616	32.666
55-64	YEARS	748	2005	19.439	52.105
65 AND	OVER	1839	3844	47.791	99.896
UNKNOWN		4	3848	0.104	100.000

Table 10f. Frequency and percentage distributions for age-specific deaths for males in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		593			
UNDER 5		602	602	5.496	5.496
5-14	YEARS	119	721	1.086	6.582
15-24	YEARS	455	1176	4.154	10.736
25-44	YEARS	977	2153	8.919	19.655
45-54	YEARS	1196	3349	10.918	30.573
55-64	YEARS	2145	5494	19.582	50.155
65 AND	OVER	5438	10932	49.644	99.799
UNKNOWN		22	10954	0.201	100.000

Table 10g. Frequency and percentage distributions for age-specific deaths for males in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		715			
UNDER 5		484	484	3.450	3.450
5-14	YEARS	132	616	0.941	4.390
15-24	YEARS	666	1282	4.747	9.137
25-44	YEARS	1356	2638	9.664	18.801
45-54	YEARS	1399	4037	9.971	28.772
55-64	YEARS	2744	6781	19.557	48.329
65 AND	OVER	7239	14020	51.593	99.922
UNKNOWN		11	14031	0.078	100.000

Table 10h. Frequency and percentage distributions for age-specific deaths for males in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		695			
UNDER 5		424	424	3.081	3.081
5-14	YEARS	102	526	0.741	3.823
15-24	YEARS	576	1102	4.186	8.009
25-44	YEARS	1452	2554	10.552	18.561
45-54	YEARS	1221	3775	8.874	27.435
55-64	YEARS	2548	6323	18.517	45.952
65 AND	OVER	7419	13742	53.917	99.869
UNKNOWN		18	13760	0.131	100.000

Table 10i. Frequency and percentage distributions for age-specific deaths for females in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		104			
UNDER 5		169	169	7.238	7.238
5-14	YEARS	32	201	1.370	8.608
15-24	YEARS	50	251	2.141	10.749
25-44	YEARS	205	456	8.779	19.529
45-54	YEARS	263	719	11.263	30.792
55-64	YEARS	360	1079	15.418	46.210
65 AND	OVER	1255	2334	53.747	99.957
UNKNOWN		1	2335	0.043	100.000

Table 10j. Frequency and percentage distributions for age-specific deaths for females in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		307			
UNDER 5		435	435	6.213	6.213
5-14	YEARS	89	524	1.271	7.485
15-24	YEARS	165	689	2.357	9.841
25-44	YEARS	539	1228	7.699	17.540
45-54	YEARS	730	1958	10.427	27.967
55-64	YEARS	1125	3083	16.069	44.037
65 AND	OVER	3903	6986	55.749	99.786
UNKNOWN		15	7001	0.214	100.000

Table 10k. Frequency and percentage distributions for age-specific deaths for females in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		392			
UNDER 5		358	358	4.026	4.026
5-14	YEARS	74	432	0.832	4.858
15-24	YEARS	250	682	2.811	7.669
25-44	YEARS	638	1320	7.174	14.843
45-54	YEARS	767	2087	8.625	23.468
55-64	YEARS	1461	3548	16.429	39.897
65 AND	OVER	5329	8877	59.924	99.820
UNKNOWN		16	8893	0.180	100.000

Table 10l. Frequency and percentage distributions for age-specific deaths for females in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

NAGE		FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
		398			
UNDER 5		303	303	3.157	3.157
5-14	YEARS	53	356	0.552	3.709
15-24	YEARS	223	579	2.323	6.033
25-44	YEARS	670	1249	6.981	13.013
45-54	YEARS	704	1953	7.335	20.348
55-64	YEARS	1472	3425	15.337	35.685
65 AND	OVER	6152	9577	64.097	99.781
UNKNOWN		21	9598	0.219	100.000

Table 11a. Frequency and percentage distributions for race-specific deaths for both sexes in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	6066	6066	92.696	92.696
BLACK	312	6378	4.768	97.463
INDIAN	136	6514	2.078	99.542
OTHER & UNKNOWN	30	6544	0.458	100.000

Table 11b. Frequency and percentage distributions for race-specific deaths for both sexes in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	17394	17394	92.251	92.251
BLACK	1018	18412	5.399	97.650
INDIAN	357	18769	1.893	99.544
OTHER & UNKNOWN	86	18855	0.456	100.000

Table 11c. Frequency and percentage distributions for race-specific deaths for both sexes in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	22167	22167	92.232	92.232
BLACK	1256	23423	5.226	97.458
INDIAN	472	23895	1.964	99.422
OTHER & UNKNOWN	139	24034	0.578	100.000

Table 11d. Frequency and percentage distributions for race-specific deaths for both sexes in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	22674	22674	92.713	92.713
BLACK	1187	23861	4.854	97.567
INDIAN	399	24260	1.632	99.199
OTHER & UNKNOWN	196	24456	0.801	100.000

Table 11e. Frequency and percentage distributions for race-specific deaths for males in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	3811	3811	92.997	92.997
BLACK	185	3996	4.514	97.511
INDIAN	80	4076	1.952	99.463
OTHER & UNKNOWN	22	4098	0.537	100.000

Table 11f. Frequency and percentage distributions for race-specific deaths for males in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	10648	10648	92.214	92.214
BLACK	617	11265	5.343	97.558
INDIAN	220	11485	1.905	99.463
OTHER & UNKNOWN	62	11547	0.537	100.000

Table 11g. Frequency and percentage distributions for race-specific deaths for males in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	13576	13576	92.066	92.066
BLACK	796	14372	5.398	97.464
INDIAN	284	14656	1.926	99.390
OTHER & UNKNOWN	90	14746	0.610	100.000

Table 11h. Frequency and percentage distributions for race-specific deaths for males in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	13339	13339	92.279	92.279
BLACK	745	14084	5.154	97.433
INDIAN	250	14334	1.730	99.163
OTHER & UNKNOWN	121	14455	0.837	100.000

Table 11i. Frequency and percentage distributions for race-specific deaths for females in Nevada during the time interval between 1968 to 1969. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	2248	2248	92.169	92.169
BLACK	127	2375	5.207	97.376
INDIAN	56	2431	2.296	99.672
OTHER & UNKNOWN	8	2439	0.328	100.000

Table 11j. Frequency and percentage distributions for race-specific deaths for females in Nevada during the time interval between 1970 to 1974. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	6746	6746	92.310	92.310
BLACK	401	7147	5.487	97.797
INDIAN	137	7284	1.875	99.672
OTHER & UNKNOWN	24	7308	0.328	100.000

Table 11k. Frequency and percentage distributions for race-specific deaths for females in Nevada during the time interval between 1975 to 1979. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	8591	8591	92.526	92.526
BLACK	459	9050	4.943	97.469
INDIAN	188	9238	2.025	99.494
OTHER & UNKNOWN	47	9285	0.506	100.000

Table 11l. Frequency and percentage distributions for race-specific deaths for females in Nevada during the time interval between 1980 to 1983. Similar data exist for each county. (Cause of death determined by ICD-8 or ICD-9 codes.)

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
WHITE	9331	9331	93.347	93.347
BLACK	442	9773	4.422	97.769
INDIAN	149	9922	1.491	99.260
OTHER & UNKNOWN	74	9996	0.740	100.000

Table 12

Sound Level Exposure Per Township - Average Between 1969-1983

Risk Area	Township	Mean Day-Night C-weighted average sound level (dB)	Rank
High Exposure:			
	Caliente	52.92	1
	Moapa	49.17	2
	Alamo	48.69	3
	Panaca	47.11	4
	Lake	43.15	5
	Gerlach	43.13	6
	Beatty	41.73	7
	Las Vegas	40.77	8
	Tonopah	40.60	9
	Union	40.07	10
	Pioche	39.74	11
	New River	38.22	12
	Wells	36.65	13
	Argente	36.61	14
	Sparks	36.54	15
	Reno	36.36	16
	Austin	36.32	17
	Esmeralda	36.30	18
	Wadsworth	36.25	19
Medium Exposure:			
	Ely	35.99	20
	McDermitt	35.92	21
	Elko	35.77	22
	Gold Run	35.51	23
	Goodsprings	35.08	24
	Eureka	34.59	25
	Mt. City	33.87	26
	Paradise Valley	33.76	27
	Searchlight	33.54	28
	East Line	33.45	29
	Tecoma	33.15	30
	Nelson	33.01	31
	N. Las Vegas	32.91	32
	Pahrump	32.62	33
	Hawthorne	32.47	34
	Gabbs	31.93	35
	Carlin	31.73	36
	Mina	31.25	37
	Mason Valley	31.15	38
	Henderson	31.07	39
Low Exposure:			
	Jackpot	30.83	40
	Overton	30.76	41
	Beowawe	30.47	42
	Baker	29.69	43
	East Fork	29.21	44
	Dayton	29.17	45
	Round Mt.	28.42	46
	Schurz	27.64	47
	Lund	27.39	48
	Smith Valley	27.39	49
	Mesquite	26.29	50
	Jarbidge	26.20	51
	Virginia	26.19	52
	Canal	25.41	53
	Bunkerville	24.81	54
	Carson City	24.46	55
	Logan	24.02	56
	Verdi	21.55	57
	Tahoe	18.58	58

Table 13

Crude Death Rate of Residents by Township

Nevada

Township	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Mean	S.D.
(1) Carson City	8.946	8.782	7.693	6.776	6.100	6.789	5.527	5.889	6.310	7.325	9.217	8.018	8.557	7.135	9.637	8.278	7.561	1.232
(2) New River	10.826	7.417	10.273	9.279	8.174	8.102	8.403	10.167	10.674	11.224	9.435	9.616	10.275	10.897	8.560	10.410	9.608	1.133
(3) Dunkerville	2.339	5.769	6.100	6.094	6.088	6.319	6.334	6.048	6.463	6.605	6.036	6.245	7.018	6.512	6.924	6.686	6.099	1.025
Goodsprings	2.339	5.769	5.794	6.094	6.088	6.319	6.334	4.570	8.440	9.414	8.552	6.245	6.885	6.512	6.924	6.686	6.435	1.567
Henderson	5.732	5.892	6.295	6.195	6.315	6.457	6.381	6.319	6.786	6.738	6.352	6.396	6.939	6.649	6.980	6.812	6.452	0.340
Las Vegas	6.460	5.926	6.247	6.169	6.227	6.454	6.367	6.319	6.776	6.724	6.296	6.366	6.895	6.607	6.961	6.764	6.472	0.280
Logan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.775	4.344	3.770	1.089	0.000	0.000	0.000	0.000	0.000	0.874	1.674
Mesquite	2.339	5.769	6.134	6.094	6.088	6.319	6.334	6.319	6.792	6.895	6.355	6.245	6.809	6.512	6.924	6.686	6.163	1.038
Moapa	2.339	5.769	6.112	6.094	6.088	6.319	6.259	6.222	6.835	6.603	6.302	6.477	6.790	6.657	6.924	6.600	6.149	1.031
Nelson	7.403	7.301	9.693	7.677	7.727	9.083	8.373	5.539	7.749	8.632	9.251	9.053	9.544	8.703	8.068	6.858	8.166	1.065
N. Las Vegas	4.968	5.858	6.193	6.168	6.214	6.426	6.365	6.319	6.753	6.711	6.275	6.351	6.867	6.576	6.958	6.754	6.360	0.460
Overton	2.339	0.242	0.190	0.164	0.160	0.149	0.807	6.188	2.153	3.904	4.223	1.201	0.067	0.065	0.050	6.686	1.787	2.199
Searchlight	0.000	0.000	2.809	0.000	0.000	0.000	0.000	6.978	8.911	4.060	7.373	1.709	0.000	0.000	0.000	0.000	1.990	3.025
(4) East Fork	5.493	6.964	5.812	7.200	4.706	4.089	4.904	4.685	6.770	5.668	6.615	5.592	6.488	4.325	4.948	4.640	5.556	0.969
Tahoe	5.493	6.964	5.812	7.200	4.706	4.089	4.904	4.684	6.769	5.667	6.614	5.592	6.489	4.325	4.949	4.639	5.556	0.969
(5) Carlin	8.945	7.310	8.902	7.177	7.675	9.183	6.630	9.110	10.448	8.818	9.338	8.777	8.699	8.876	6.871	5.678	8.277	1.205
East Line	8.945	7.310	9.359	7.177	7.675	9.183	6.630	11.962	10.440	10.386	9.334	9.547	10.030	8.879	7.109	5.679	8.728	1.608
Elko	8.948	7.921	9.087	7.174	7.671	9.178	6.623	8.595	10.442	8.839	9.329	9.139	9.085	8.892	7.011	5.678	8.351	1.189
Jackpot	·	·	·	7.177	7.675	9.183	6.630	7.683	10.449	9.500	8.653	8.777	8.525	8.876	6.871	5.678	6.605	3.373
Jarbidge	8.945	7.310	8.920	7.177	7.675	9.183	6.630	7.169	10.440	17.256	9.366	8.777	8.685	8.876	6.871	5.678	8.672	2.519
Mt. City	0.000	0.000	0.000	0.000	0.000	0.000	0.849	3.486	6.965	6.501	4.470	2.543	5.757	4.856	4.412	1.418	2.452	2.370
Tecoma	8.945	7.310	8.873	7.177	7.675	9.183	6.630	7.169	10.458	8.436	9.373	8.777	8.549	8.876	6.871	5.678	8.124	1.201
Wells	8.945	7.310	8.890	7.177	7.675	9.183	6.630	7.169	10.441	7.763	9.366	8.777	8.532	8.876	6.871	5.678	8.080	1.199
(6) Esmeralda	9.158	10.695	11.129	8.333	14.000	11.364	10.000	11.429	11.673	12.329	9.639	15.081	14.157	12.361	14.444	9.783	11.598	1.954
(7) Beowawe	8.607	12.034	4.988	9.999	7.778	4.928	10.000	8.183	8.211	8.105	0.000	7.870	6.678	4.804	7.143	3.521	7.053	2.803
Eureka	19.863	12.036	10.969	10.001	7.778	11.323	10.000	8.181	8.212	8.105	5.687	8.210	6.678	4.804	7.143	3.521	8.907	3.623
(8) Gold Run	9.988	11.176	9.722	12.379	13.807	8.927	9.696	9.364	10.304	9.151	7.408	7.547	7.632	7.499	6.936	5.497	9.190	2.059
McDermitt	9.995	11.176	9.726	12.379	13.807	8.927	9.704	9.380	10.306	9.151	7.408	7.547	7.633	7.502	6.936	5.498	9.192	2.059
Paradise Valley	9.995	11.176	9.718	12.379	13.807	8.927	9.704	11.970	10.309	9.152	7.408	7.547	7.626	7.499	6.936	5.497	9.353	2.167
Union	9.996	11.170	9.726	12.382	13.810	8.928	9.706	9.520	10.305	9.154	7.411	7.550	7.632	7.501	6.937	5.499	9.202	2.060
(9) Argenta	8.890	7.782	5.773	11.153	8.696	7.723	7.440	6.667	4.929	9.232	5.656	5.698	6.869	7.256	4.753	4.505	7.064	1.780
Austin	21.115	11.616	12.077	11.157	8.696	7.725	13.130	6.667	4.929	9.889	5.656	5.698	6.871	7.258	4.753	4.505	8.859	4.160
(10) Alamo	8.141	13.037	5.868	13.042	12.607	8.981	3.738	9.709	9.367	6.156	7.857	7.421	10.081	7.019	6.004	5.398	8.402	2.713
Caliente	8.141	13.037	5.866	13.042	12.607	8.981	4.667	13.359	16.588	8.780	14.870	7.422	10.436	7.500	4.443	6.221	9.748	3.644
Panaca	8.141	13.037	5.865	13.042	12.607	8.981	3.854	11.027	11.320	6.816	8.159	7.421	10.081	7.019	6.004	5.398	8.673	2.801
Pioche	8.141	13.037	5.866	13.042	12.607	8.981	5.093	9.334	7.932	5.720	6.947	7.421	10.084	7.019	6.004	5.398	8.289	2.612
(11) Canal	6.972	9.704	8.272	8.802	9.993	8.656	8.728	7.392	8.112	8.977	9.767	9.637	10.368	7.755	9.431	8.373	8.809	0.940
Dayton	6.972	9.704	8.275	8.802	9.993	8.656	8.727	7.399	8.114	8.975	9.768	9.624	10.266	7.749	9.411	8.363	8.800	0.928
Mason Valley	6.971	9.704	8.271	8.803	9.998	8.661	8.734	7.399	8.126	8.985	9.783	9.642	10.288	7.765	9.442	8.392	8.810	0.932
Smith Valley	6.972	9.704	8.275	8.802	9.993	8.656	8.727	7.378	8.128	8.975	9.761	9.624	10.259	7.749	9.411	8.363	8.798	0.928
(12) Hawthorne	9.561	8.156	7.517	13.692	10.150	10.020	8.971	7.273	7.702	10.506	7.975	8.906	9.490	11.818	8.268	11.594	9.475	1.722
Mina	9.563	8.153	7.521	13.691	10.153	10.021	8.969	7.273	7.774	17.413	10.975	8.905	9.496	11.820	8.272	11.593	10.099	2.536
Schurz	9.560	8.153	7.514	13.691	10.153	10.021	8.969	7.273	7.689	9.369	8.911	8.906	9.489	11.819	8.266	11.599	9.462	1.669
(13) Beatty	8.464	6.853	12.639	9.815	8.311	6.848	11.449	7.717	4.274	8.304	7.889	11.684	11.887	11.332	6.847	7.096	8.838	2.297
Gabbs	8.464	7.148	12.534	9.815	8.311	6.848	11.656	8.733	5.096	8.836	8.079	11.684	11.943	11.368	6.847	7.500	9.054	2.144
Pahrump	8.464	6.853	12.639	9.815	8.311	6.848	11.539	9.704	6.342	9.940	8.747	11.684	11.944	11.368	6.847	7.197	9.265	2.048
Round Mt.	8.464	6.853	12.639	9.815	8.311	6.848	12.078	9.227	3.145	8.908	8.079	11.684	11.935	11.368	6.847	7.286	8.968	2.469
Tonopah	12.155	13.826	11.486	8.379	8.810	9.850	12.577	12.661	10.827	10.384	8.478	10.110	10.372	10.571	6.010	6.150	10.165	2.139
(14) Lake	12.859	13.931	13.483	14.231	13.600	18.367	10.800	12.593	12.487	11.542	12.388	10.727	13.204	8.494	6.684	10.209	12.225	2.539
(15) Virginia	26.816	11.494	17.266	12.857	15.714	13.621	6.667	10.000	8.547	13.599	9.426	16.794	7.984	3.817	6.471	8.000	11.817	5.421
(16) Gerlach	7.692	6.044	8.493	8.520	9.326	8.468	8.523	7.796	8.985	8.773	8.566	8.015	7.949	7.729	7.923	7.558	8.147	0.731
Reno	8.796	8.144	7.976	7.804	8.515	7.606	7.784	8.089	8.296	8.094	7.818	7.456	7.237	7.159	7.046	6.856	7.792	0.525
Sparks	8.454	7.304	8.126	8.040	8.836	7.896	8.040	7.897	8.574	8.273	7.963	7.567	7.458	7.292	7.288	7.084	7.881	0.496
Verdi	7.692	6.044	8.903	8.520	9.326	8.468	8.586	7.704	9.299	8.491	8.566	7.993	7.994	7.729	7.923	7.558	8.175	0.769
Wadsworth	7.692	6.044	8.955	8.520	9.326	8.468	8.551	7.766	8.530	8.773	8.566	7.988	7.937	7.547	7.923	7.448	8.127	0.746
(17) Baker	10.932	9.661	8.876	9.199	6.893	6.998	8.400	8.023	9.676	10.279	10.137	10.342	10.417	12.188	10.414	9.084	9.670	1.365
Ely	8.220	8.334	8.867	9.200	6.893	6.999	8.400	8.020	9.698	10.273	10.156	10.348	10.408	12.191	10.418	9.090	9.220	1.359
Lund	10.932	8.733	8.857	9.199	6.893	6.998	8.400	8.019	9.694	10.268	10.166	10.342	10.402	12.188	10.414	9.084	9.412	1.376
Nevada State	8.722	8.216	8.448	8.312	8.415	8.266	8.168	8.176	8.558	8.592	8.230	8.128	8.568	8.132	8.162	7.932	8.314	0.208
U.S.	9.700	9.500	9.500	9.300	9.400	9.300	9.100	8.800	8.800	8.600	8.700	8.500	8.800	8.600	8.500	8.600	9.580	0.397

S.D. = Standard Deviation
Rates are per 1,000 estimated population.
( ) = Reflect the county codes in Table 2.
Data of U.S. before 1980 refer to #9 in Bibliography.
Data of U.S. after 1980 refer to #10 in Bibliography.

Table 14

CRUDE DEATH RATE OF NEVADA RESIDENTS BY COUNTY
NEVADA: 1968-1983

County	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	Mean	S.D.
(1) Carson City	8.946	8.782	7.693	6.776	6.100	6.789	5.527	5.889	6.310	7.325	9.217	8.018	8.557	7.135	9.637	8.278	7.561	1.232
(2) Churchill	10.824	7.417	10.273	9.279	8.174	8.102	8.403	10.167	10.674	11.224	9.435	9.616	10.275	10.897	8.560	10.410	9.608	1.133
(3) Clark	6.110	5.888	6.266	6.154	6.213	6.455	6.365	6.297	6.775	6.747	6.345	6.382	6.899	6.601	6.935	6.740	6.448	0.295
(4) Douglas	5.493	6.964	5.812	7.200	4.706	4.089	4.904	4.685	6.770	5.668	6.615	5.592	6.488	4.325	4.949	4.640	5.556	0.969
(5) Elko	8.225	7.112	8.304	6.603	7.069	8.468	6.183	8.068	10.183	8.444	8.958	8.586	8.748	8.606	6.802	5.391	7.859	1.182
(6) Esmeralda	9.158	10.695	11.129	8.333	14.000	11.364	10.000	11.429	11.673	12.329	9.639	15.081	14.157	12.361	14.444	9.783	11.598	1.954
(7) Eureka	15.258	12.035	8.439	10.000	7.778	8.789	10.000	8.182	8.212	8.105	3.687	8.094	6.678	4.804	7.143	3.521	8.170	2.838
(8) Humboldt	9.995	11.172	9.725	12.381	13.810	8.928	9.705	9.577	10.305	9.153	7.410	7.549	7.632	7.501	6.937	5.499	9.205	2.061
(9) Lander	11.016	8.413	6.752	11.154	8.696	7.723	8.214	6.667	4.929	9.012	5.656	5.698	6.869	7.257	4.753	4.505	7.332	1.966
(10) Lincoln	8.141	13.037	5.866	13.042	12.607	8.981	4.400	11.109	11.772	7.014	9.840	7.421	10.182	7.150	5.594	5.605	8.860	2.787
(11) Lyon	6.971	9.704	8.271	8.803	9.996	8.658	8.731	7.396	8.120	8.980	9.774	9.634	10.299	7.756	9.426	8.374	8.806	0.933
(12) Mineral	4.780	4.201	3.856	6.745	5.077	5.081	4.521	3.611	3.743	5.184	3.897	4.191	4.570	5.752	4.005	5.580	4.675	0.832
(13) Nye	10.046	9.826	12.148	9.244	8.504	7.974	11.935	9.999	6.887	9.347	8.242	11.200	11.455	11.126	6.618	6.908	9.466	1.764
(14) Pershing	12.859	13.931	13.483	14.231	13.600	18.367	10.800	12.593	12.487	11.542	12.388	10.727	13.204	8.494	6.684	10.209	12.225	2.539
(15) Storey	26.814	11.494	17.266	12.857	15.714	13.621	6.667	10.000	8.547	13.599	9.426	16.794	7.984	3.817	6.471	8.000	11.817	5.421
(16) Washoe	8.697	7.912	8.024	7.872	8.606	7.691	7.860	8.034	8.379	8.150	7.868	7.494	7.308	7.203	7.127	6.931	7.822	0.497
(17) White Pine	8.358	8.367	8.867	9.200	6.796	6.899	8.400	8.020	9.698	10.273	10.036	10.348	10.408	12.312	10.418	9.089	9.218	1.384
Nevada State	8.722	8.216	8.448	8.312	8.415	8.266	8.168	8.176	8.558	8.592	8.230	8.128	8.568	8.132	8.162	7.932	8.314	0.208
U.S.	9.700	9.500	9.500	9.300	9.400	9.300	9.100	8.800	8.800	8.600	8.700	8.500	8.800	8.600	8.500	8.600	9.580	0.397

S.D. = Standard Deviation
Rates are per 1,000 estimated population.
Data of U.S. before 1980 refer to #9 in Bibliography.
Data of U.S. after 1980 refer to #10 in Bibliography.

Table 15a. Cause-specific, but not age-adjusted, death rates per 100,000 for both sexes by county during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	CANCER	RESPIRAT	HEART	HYPERTEN	CVA	ATHEROSC	VESSEL	CV_DIS	STRESS	REPROD	MALFORM	OTHERS
STATE TOTAL	82.049	32.2680	151.116	.	44.554	.	6.6220	.	.	.	5.2279	388.464
CARSON CITY	107.447	36.5620	224.595	.	55.216	.	10.4453	.	.	.	.	405.913
CHURCHILL	122.551	56.9604	288.254	.	81.125	.	17.2607	.	.	.	3.4521	433.244
CLARK	77.772	30.5782	152.891	.	41.789	.	5.2549	.	.	.	5.9555	370.542
DOUGLAS	59.630	20.2743	129.994	.	26.237	.	5.9630	.	.	.	5.9630	258.795
ELKO	68.433	28.9523	182.926	.	48.692	.	5.2641	.	.	.	6.5801	393.488
ESMERRALDA	58.720	58.7199	352.319	.	117.440	.	58.7199	.	.	.	.	616.559
EUREKA	56.958	37.9723	208.847	.	18.986	.	18.9861	.	.	.	.	208.847
HUMBOLDT	71.894	37.1066	160.022	.	39.426	.	6.9575	.	.	.	9.2767	357.151
LANDER	88.736	15.6593	135.713	.	41.758	.	.	.	.	.	5.2198	281.867
LINCOLN	79.278	30.4915	207.342	.	24.393	.	.	.	.	.	.	420.783
LYON	98.182	28.7775	209.906	.	52.477	.	20.3135	.	.	.	.	485.831
MINERAL	139.648	51.8693	167.578	.	47.879	.	11.9698	.	.	.	.	610.462
NYE	61.230	48.5621	160.466	.	48.562	.	14.7798	.	.	.	.	424.391
PERSHING	117.241	75.8621	193.103	.	75.862	.	20.6897	.	.	.	13.7931	462.069
STOREY	91.954	45.9770	168.582	.	45.977	.	.	.	.	.	.	306.513
WASHOE	85.731	33.5096	108.478	.	44.394	.	7.2156	.	.	.	4.5250	421.072
WHITE PINE	118.140	28.1286	306.602	.	115.327	.	.	.	.	.	14.0643	464.122

Table 15b. Cause-specific, but not age-adjusted, death rates per 100,000 for males by county during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	CANCER	RESPIRAT	HEART	HYPERTEN	CVA	ATHEROSC	VESSEL	CV_DIS	STRESS	REPROD	MALFORM	OTHERS
STATE TOTAL	162.149	63.769	298.641	.	88.048	.	13.087	.	.	.	10.3316	787.70
CARSON CITY	211.308	71.903	441.692	.	108.589	.	20.544	.	.	.	.	798.27
CHURCHILL	242.984	112.936	571.526	.	160.849	.	34.223	.	.	.	6.8446	859.00
CLARK	154.209	60.632	303.158	.	82.860	.	10.419	.	.	.	11.8088	734.72
DOUGLAS	117.203	39.849	255.503	.	51.569	.	11.720	.	.	.	11.7203	508.86
ELKO	130.280	55.118	348.249	.	92.699	.	10.021	.	.	.	12.5269	749.11
ESMERRALDA	110.497	110.497	662.983	.	220.994	.	110.497	.	.	.	.	1160.22
EUREKA	105.597	70.398	387.188	.	35.199	.	35.199	.	.	.	.	387.19
HUMBOLDT	132.264	68.265	294.394	.	72.532	.	12.800	.	.	.	17.0663	657.05
LANDER	163.887	28.921	250.651	.	77.123	.	.	.	.	.	9.6404	520.58
LINCOLN	159.7^4	61.448	417.844	.	49.158	.	.	.	.	.	.	847.98
LYON	194.559	57.026	415.954	.	103.988	.	40.254	.	.	.	.	982.73
MINERAL	275.460	102.314	330.552	.	94.444	.	23.611	.	.	.	.	1204.16
NYE	114.160	90.540	299.177	.	90.540	.	27.556	.	.	.	.	791.25
PERSHING	222.135	143.734	365.870	.	143.734	.	39.200	.	.	.	26.1335	875.47
STOREY	180.180	90.090	330.330	.	90.090	.	.	.	.	.	.	600.60
WASHOE	170.315	66.571	215.506	.	88.195	.	14.335	.	.	.	8.9898	836.51
WHITE PINE	234.310	55.788	608.089	.	228.731	.	.	.	.	.	27.8940	920.50

Table 15c. Cause-specific, but not age-adjusted, death rates per 100,000 for females by county during the time interval between 1980 to 1983. Similiar data exist for previous time intervals (1968-1969, 1970-1974, and 1975-1979).

COUNTY	CANCER	RESPIRAT	HEART	HYPERTEN	CVA	ATHEROSC	VESSEL	CV_DIS	STRESS	REPROD	MALFORM	OTHERS
STATE TOTAL	166.096	65.321	305.912	.	90.192	.	13.405	.	.	.	10.5831	786.39
CARSON CITY	218.606	74.387	456.947	.	112.339	.	21.253	.	.	.	.	825.84
CHURCHILL	247.257	114.922	581.578	.	163.677	.	34.825	.	.	.	6.9650	874.11
CLARK	156.902	61.690	308.452	.	84.307	.	10.601	.	.	.	12.0150	747.55
DOUGLAS	121.392	41.273	264.634	.	53.412	.	12.139	.	.	.	12.1392	526.84
ELKO	144.152	60.987	385.330	.	102.570	.	11.089	.	.	.	13.8608	828.87
ESMERRALDA	125.313	125.313	751.880	.	250.627	.	125.313	.	.	.	.	1315.79
EUREKA	123.660	82.440	453.421	.	41.220	.	41.220	.	.	.	.	453 42
HUMBOLDT	157.512	81.297	350.592	.	86.378	.	15.243	.	.	.	20.3242	782.48
LANDER	193.512	34.149	295.959	.	91.064	.	.	.	.	.	11.3830	614.68
LINCOLN	157.366	60.525	411.572	.	48.420	.	.	.	.	.	.	835.25
LYON	198.202	58.094	423.743	.	105.936	.	41.007	.	.	.	.	980.76
MINERAL	283.240	105.203	339.888	.	97.111	.	24.278	.	.	.	.	1238.16
NYE	132.064	104.741	346.099	.	104.741	.	31.878	.	.	.	.	915.34
PERSHING	248.284	160.654	408.938	.	160.654	.	43.815	.	.	.	29.2099	978.53
STOREY	187.793	93.897	344.288	.	93.897	.	.	.	.	.	.	625.98
WASHOE	172.623	67.473	218.427	.	89.390	.	14.529	.	.	.	9.1114	847.85
WHITE PINE	238.284	56.734	618.405	.	232.611	.	.	.	.	.	28.3672	936.12

Table 16

COMPARISON BETWEEN DEATH RATES BY RISK AREA

NEVADA: 1968-1983

	ANALYSIS OF VARIANCE WITHIN RISK AREA							T-test of Death Rates between Risk Areas (p-value)		
	LOW RISK AREA		MEDIUM RISK AREA		HIGH RISK AREA		ALL AREAS			
	Death Rate Mean +/- S.D.	P-Value	Death Rate Mean +/- S.D.	P-Value	Death Rate Mean +/- S.D.	P-Value	P-Value	Low vs Medium	Medium vs High	Low vs High
By Township:										
Crude Death Rate	7.371 3.092	0.0000	7.853 2.812	0.0000	8.669 2.531	0.0000	0.0122	0.0004	0.0000	0.0000
By County(age-adjusted):										
Cardiovascular:										
Male	4.057 +/- 1.360	0.0003	4.586 +/- 1.884	0.4213	4.067 +/- 0.094	0.0042	0.0630	0.0425	0.0294	0.9630
Female	2.330 +/- 1.189	0.0000	1.818 +/- 0.760	0.7457	2.244 +/- 0.691	0.0068	0.0065	0.0030	0.0067	0.5564
Both	3.159 +/- 1.036	0.0000	3.227 +/- 1.052	0.1381	3.147 +/- 0.587	0.0001	0.8643	0.6829	0.5975	0.9310
Hypertension:										
Male	0.022 +/- 0.048	0.0028	0.028 +/- 0.052	0.0000	0.032 +/- 0.075	0.0691	0.6454	0.6252	0.7370	0.3499
Female	0.029 +/- 0.059	0.0037	0.020 +/- 0.027	0.0000	0.023 +/- 0.039	0.0000	0.5065	0.2569	0.6328	0.4110
Both	0.026 +/- 0.048	0.0036	0.024 +/- 0.038	0.0000	0.027 +/- 0.044	0.0884	0.8974	0.7614	0.6427	0.8878
Cancer:										
Male	1.933 +/- 0.764	0.0000	1.381 +/- 0.579	0.1254	1.870 +/- 0.481	0.0000	0.0000	0.0000	0.0000	0.5261
Female	1.394 +/- 0.635	0.0000	0.858 +/- 0.439	0.0281	1.250 +/- 0.515	0.9368	0.0000	0.0000	0.0001	0.1044
Both	1.634 +/- 0.595	0.0000	1.144 +/- 0.364	0.0651	1.548 +/- 0.351	0.0000	0.0000	0.0000	0.0000	0.2331
CVA:										
Male	0.698 +/- 0.446	0.0857	0.840 +/- 0.697	0.1363	0.838 +/- 0.341	0.0194	0.1624	0.1270	0.9833	0.0765
Female	0.578 +/- 0.300	0.2082	0.760 +/- 0.800	0.0051	0.672 +/- 0.330	0.0031	0.1438	0.0503	0.2990	0.2322
Both	0.628 +/- 0.199	0.3153	0.738 +/- 0.463	0.0290	0.746 +/- 0.245	0.8994	0.0464	0.0608	0.8796	0.0182
Other Diseases:										
Male	4.859 +/- 1.599	0.0002	5.501 +/- 2.294	0.0039	5.189 +/- 1.547	0.0000	0.1709	0.0617	0.3193	0.2562
Female	2.794 +/- 1.110	0.0000	2.457 +/- 0.702	0.2365	2.655 +/- 0.848	0.0000	0.1581	0.0553	0.2156	0.3514
Both	3.773 +/- 1.268	0.0000	3.981 +/- 1.422	0.0125	3.909 +/- 1.143	0.0000	0.6708	0.3911	0.7446	0.5094
All Diseases:										
Male	11.569 +/- 3.180	0.0000	12.336 +/- 3.230	0.0745	11.997 +/- 1.991	0.0000	0.3345	0.1442	0.4784	0.3370
Female	7.126 +/- 2.169	0.0000	5.913 +/- 1.023	0.0113	6.845 +/- 0.959	0.0002	0.0001	0.0000	0.0003	0.2367
Both	9.221 +/- 2.398	0.0000	9.114 +/- 1.640	0.0465	9.377 +/- 1.355	0.0000	0.6862	0.7580	0.4064	0.5962

Rates are per 1000 estimated population.

Table 17

AGE-ADJUSTED DEATH RATES OF ALL CAUSES IN NEVADA RESIDENTS

	COUNTY	1968-69 MALE	1968-69 FEMALE	1968-69 BOTH	1970-74 MALE	1970-74 FEMALE	1970-74 BOTH	1975-79 MALE	1975-79 FEMALE	1975-79 BOTH	1980-83 MALE	1980-83 FEMALE	1980-83 BOTH
High Risk Area:													
(2)	Churchill	10.6429	6.2539	8.6357	10.3197	7.2720	8.9538	10.5578	7.2558	9.1768	8.7421	9.0862	9.0408
(3)	Clark	8.3670	5.2676	6.9032	8.5953	6.1512	7.4745	8.6952	6.4373	7.6458	9.1117	7.4403	8.3469
(8)	Humboldt	11.3280	7.5976	9.7248	12.6702	7.5542	10.5012	11.6574	7.4713	10.0354	8.8624	7.3406	8.3464
(9)	Lander	13.4051	6.6588	10.3134	12.5732	6.4466	9.8977	10.2369	7.7891	9.3605	10.0845	6.8028	8.8821
(10)	Lincoln	9.9837	9.1598	9.6086	10.1037	5.6931	8.1072	10.6485	6.1538	8.4934	7.4693	6.4374	7.0278
(13)	Nye	9.7506	8.6126	9.4457	9.8124	7.9115	9.1828	9.4667	7.6261	8.9004	8.3657	6.5436	7.7742
(14)	Pershing	12.4978	9.4489	11.1632	15.1796	8.7297	12.3211	13.1442	6.6747	10.5588	10.3045	7.0655	8.9626
(16)	Washoe	9.8557	7.1532	8.5462	9.7130	6.9045	8.3672	9.6613	7.4435	8.6450	8.5036	7.4176	8.0354
	Mean	10.7288	7.5191	9.2926	11.1209	7.0829	9.3507	10.5085	7.1065	9.1020	8.9305	7.2668	8.3020
	S.D.	1.5211	1.3767	1.2015	2.0228	0.9282	1.4433	1.2968	0.5642	0.8519	0.8609	0.7774	0.6419
Medium Risk Area:													
(5)	Elko	11.2758	5.2693	8.5894	9.9651	6.3646	8.3663	11.6156	7.2874	9.7899	9.0423	6.8697	8.1787
(6)	Esmeralda	10.7076	4.1332	7.6924	8.6270	6.2740	8.0697	11.7528	8.1505	10.0143	14.0107	6.3348	10.8210
(7)	Eureka	15.7590	5.6701	11.8513	7.2762	7.6511	7.3288	9.6305	6.2885	8.7203	8.0135	4.4959	7.1529
(17)	White Pine	8.7441	5.3336	7.1454	9.2203	6.8572	8.1579	10.9056	6.4508	8.8636	10.6580	8.5957	9.7707
	Mean	14.6841	7.3255	11.4432	12.0581	8.7895	10.6792	13.9274	8.9620	11.8355	12.8790	8.5851	11.2168
	S.D.	4.2628	1.8609	3.2421	2.9362	2.2526	2.6069	3.6418	2.4945	3.1823	3.9592	2.5262	3.2772
Low Risk Area:													
(1)	Carson City	12.3733	9.0746	10.6911	9.6520	6.4240	8.0313	8.5266	6.0094	7.3371	9.2832	7.6316	8.5362
(4)	Douglas	8.2386	5.4291	6.9042	6.8775	5.6207	6.2772	7.0303	5.8109	6.5177	6.0867	5.3959	5.8598
(11)	Lyon	11.3374	4.6751	8.2837	9.8431	7.4748	8.7990	8.9495	7.0390	8.1576	8.7687	7.3980	8.1807
(12)	Mineral	9.1331	7.1664	8.2701	11.3478	7.9586	9.8149	8.6650	7.2130	8.0973	10.9506	8.5629	9.9339
(15)	Storey	19.8477	10.0016	14.7717	11.8589	9.7929	10.8007	11.3151	11.6058	11.4321	7.6218	6.3385	7.1084
	Mean	12.1860	7.2693	9.7842	9.9159	7.4542	8.7446	8.8973	7.5356	8.3084	8.5422	7.0654	7.9238
	S.D.	4.7727	2.7455	3.5167	3.0477	2.3343	2.6884	2.3289	2.6894	2.4451	2.2650	1.9647	2.1369
	State Total	9.4229	6.1696	7.8892	9.2813	6.5771	8.0360	9.1660	6.7110	8.0756	8.9071	7.3496	8.2535
	U.S. Total	9.4500	5.4840	7.3090	9.2190	5.2000	7.0180	8.1190	4.5060	6.1230	7.7720	4.3260	5.8580

Rates are per 1,000 estimated population.

Table 18 panel 1

AGE-ADJUSTED DEATH RATES DUE OF CARDIOVASCULAR DISEASE IN NEVADA RESIDENTS

COUNTY	1968-1969			1970-74			1975-79			1980-83		
	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH
High Risk Area:												
(2) Churchill	3.3372	1.6430	2.4402	4.1876	2.4143	3.2906	4.4526	2.0682	3.1956	4.2047	2.3695	3.2471
(3) Clark	3.3158	1.3823	2.3260	3.7518	1.8122	2.7381	3.8724	2.0923	2.8631	4.1438	2.4459	3.1331
(8) Humboldt	3.9929	2.0148	3.0433	4.5800	2.8086	3.7686	4.5125	2.1499	3.3891	3.2024	2.2973	2.7978
(9) Lander	5.0176	1.5893	3.4330	5.1657	2.9677	4.0687	5.2623	3.0697	4.1518	4.3202	1.1584	2.7600
(10) Lincoln	5.6477	3.1566	4.3320	3.8877	2.2538	3.0774	3.8404	1.8005	2.7698	2.5820	2.6351	2.6287
(13) Nye	2.6730	2.1366	2.5532	3.4761	1.7745	2.7689	4.1995	1.9381	3.0755	3.0192	1.7729	2.4162
(14) Pershing	3.0231	5.1044	4.0505	4.1469	2.7246	3.4443	7.2573	2.0063	4.5968	2.7078	1.7788	2.2735
(16) Washoe	4.0600	2.0384	2.9642	4.4401	2.1041	3.1737	4.2647	2.1786	3.1127	3.6005	2.1297	2.8046
Mean	3.8834	2.3832	3.1428	4.2045	2.3575	3.2913	4.7077	2.1630	3.3943	3.4726	2.0735	2.7576
S.D.	0.9532	1.1456	0.6958	0.4950	0.4222	0.4322	1.0497	0.3611	0.6034	0.6498	0.4485	0.3066
Medium Risk Area:												
(5) Elko	5.5884	1.3604	3.3717	4.8000	1.8680	3.2911	4.1064	1.6000	2.7821	3.2562	1.9695	2.6215
(6) Esmeralda	1.2456	0.0000	0.7091	4.2684	2.9843	3.7188	6.8155	2.4049	4.4683	7.1288	1.4181	3.8099
(7) Eureka	8.5549	1.4867	5.4776	1.3430	3.1529	2.1390	5.2720	2.0184	4.2304	5.3505	0.8543	3.4234
(17) White Pine	3.2929	1.4069	2.2690	3.9996	2.4876	3.2145	4.4632	1.9452	3.1519	3.8875	2.1310	2.9495
Mean	4.6705	1.0635	2.9569	3.6028	2.6232	3.0909	5.1643	1.9921	3.6582	4.9058	1.5932	3.2011
S.D.	2.7184	0.6157	1.7358	1.3361	0.4999	0.5822	1.0427	0.2859	0.7084	1.4914	0.5019	0.4526
Low Risk Area:												
(1) Carson City	4.8610	2.2475	3.3675	4.7217	2.0445	3.2120	4.3002	1.8678	2.8870	4.2691	2.3233	3.1836
(4) Douglas	4.0247	1.9751	2.9782	2.9981	2.0182	2.5165	3.5407	1.8234	2.6888	3.0665	1.6810	2.3010
(11) Lyon	2.6660	1.0688	1.8572	4.1791	1.8549	2.9672	3.1400	1.6085	2.3510	3.4085	2.2217	2.8177
(12) Mineral	3.6972	1.5403	2.6072	4.5323	2.1412	3.3440	3.3467	1.7431	2.5273	3.1589	1.8621	2.5177
(15) Storey	8.8146	2.2913	5.3314	3.0476	3.4195	3.4092	6.0082	6.5692	6.4140	3.3551	4.2912	3.8965
Mean	4.8127	1.8246	3.2283	3.8958	2.2957	3.0898	4.0672	2.7224	3.3736	3.4516	2.4759	2.9433
S.D.	2.1209	0.4629	1.1637	0.7339	0.5694	0.3241	1.0467	1.9254	1.5305	0.4274	0.9372	0.5614
State Total	3.7292	1.6837	2.6630	4.0542	1.9936	2.9735	4.0593	2.0766	2.9660	3.8936	2.2766	2.9899
U.S. Total	4.5830	2.6270	3.5200	4.4250	2.4560	3.3380	3.6870	1.9900	2.7420	3.4300	1.8790	2.5600

Rates are per 1,000 estimated population.

Table 18 panel 2

AGE-ADJUSTED DEATH RATES DUE OF HYPERTENSION IN NEVADA RESIDENTS

COUNTY	1968-69			1970-74			1975-79			1980-83		
	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH
High Risk Area:												
(2) Churchill	0.0000	0.0000	0.0000	0.0399	0.0675	0.0537	0.0288	0.0274	0.0277	0.0000	0.0273	0.0142
(3) Clark	0.0273	0.0164	0.0211	0.0380	0.0221	0.0290	0.0127	0.0172	0.0149	0.0155	0.0271	0.0213
(8) Humboldt	0.0000	0.1709	0.0924	0.0695	0.0660	0.0710	0.0000	0.0557	0.0236	0.0365	0.0000	0.0212
(9) Lander	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(10) Lincoln	0.3939	0.0000	0.1851	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(13) Nye	0.0000	0.0764	0.0000	0.1545	0.0764	0.1120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(14) Pershing	0.0000	0.1210	0.0000	0.1418	0.1210	0.1308	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(16) Washoe	0.0216	0.0183	0.0150	0.0222	0.0183	0.0197	0.0184	0.0025	0.0095	0.0079	0.0172	0.0131
Mean	0.0554	0.0504	0.0392	0.0582	0.0464	0.0520	0.0075	0.0129	0.0095	0.0075	0.0090	0.0087
S.D.	0.1284	0.0612	0.0624	0.0561	0.0403	0.0463	0.0105	0.0188	0.0107	0.0122	0.0119	0.0091
Medium Risk Area:												
(5) Elko	0.1635	0.0756	0.1241	0.1482	0.0552	0.0953	0.0419	0.0535	0.0465	0.0446	0.0517	0.0491
(6) Esmeralda	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(7) Eureka	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(17) White Pine	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0363	0.0181	0.0560	0.0404	0.0470
Mean	0.0409	0.0189	0.0310	0.0371	0.0138	0.0238	0.0105	0.0225	0.0162	0.0252	0.0230	0.0240
S.D.	0.0708	0.0327	0.0537	0.0642	0.0239	0.0413	0.0181	0.0233	0.0190	0.0255	0.0234	0.0240
Low Risk Area:												
(1) Carson City	0.0000	0.0911	0.0538	0.0452	0.0000	0.0158	0.0000	0.0149	0.0084	0.0120	0.0258	0.0235
(4) Douglas	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0207	0.0099
(11) Lyon	0.1627	0.0000	0.0718	0.0898	0.0427	0.0670	0.0000	0.0342	0.0174	0.0000	0.0303	0.0174
(12) Mineral	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0638	0.0335	0.1384	0.2595	0.2082
(15) Storey	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mean	0.0325	0.0182	0.0251	0.0270	0.0085	0.0166	0.0000	0.0226	0.0119	0.0301	0.0673	0.0518
S.D.	0.0651	0.0364	0.0313	0.0360	0.0171	0.0260	0.0000	0.0241	0.0126	0.0544	0.0967	0.0786
State Total	0.0329	0.0197	0.0256	0.0388	0.0228	0.0297	0.0135	0.0151	0.0141	0.0152	0.0271	0.0215
U.S. Total	0.0360	0.0260	0.0300	0.0310	0.0220	0.0260	0.0190	0.0140	0.0160	0.0240	0.0180	0.0200

Rates are per 1,000 estimated population.

Table 18 panel 3

AGE-ADJUSTED DEATH RATES DUE OF CANCER IN NEVADA RESIDENTS

COUNTY	1968-1969 MALE	1968-1969 FEMALE	1968-1969 BOTH	1970-74 MALE	1970-74 FEMALE	1970-74 BOTH	1975-79 MALE	1975-79 FEMALE	1975-79 BOTH	1980-83 MALE	1980-83 FEMALE	1980-83 BOTH
High Risk Area:												
(2) Churchill	2.4261	1.1301	1.7566	1.8059	1.3882	1.5819	2.2658	1.3053	1.7659	1.7116	1.7108	1.6971
(3) Clark	1.5770	0.9793	1.2572	1.8019	1.2340	1.4894	2.0646	1.3417	1.6554	2.2603	1.5826	1.8597
(8) Humboldt	1.7727	1.1696	1.4667	1.4625	0.9495	1.2269	2.4143	1.0142	1.7114	1.6009	1.5761	1.5899
(9) Lander	1.0465	0.5298	0.7985	1.6239	0.2067	0.9500	1.7075	1.3303	1.5033	2.0472	2.7749	2.4736
(10) Lincoln	2.0520	1.0063	1.4958	1.5804	0.3422	0.9384	1.7842	1.9309	1.8339	1.2707	1.3104	1.2608
(13) Nye	0.8139	1.5515	1.1797	1.4002	0.9316	1.2007	1.2190	1.2434	1.2262	1.6674	1.0061	1.3098
(14) Pershing	3.2823	0.0000	1.6790	2.6255	1.6541	2.1663	2.1655	1.5679	1.8332	2.1685	1.7712	1.9415
(16) Washoe	1.9579	1.3573	1.6250	1.9675	1.2544	1.5696	2.2174	1.4350	1.7756	2.0932	1.4170	1.7012
Mean	1.8661	0.9655	1.4073	1.7835	0.9951	1.3904	1.9798	1.3961	1.6631	1.8525	1.6436	1.7292
S.D.	0.7274	0.4596	0.2957	0.3641	0.4700	0.3778	0.3640	0.2504	0.1937	0.3197	0.4845	0.3593
Medium Risk Area:												
(5) Elko	1.2801	0.4675	0.8672	1.2942	1.1105	1.1913	1.7443	1.2404	1.4572	1.8131	0.9605	1.3308
(6) Esmeralda	1.2796	1.3936	1.2698	1.6002	0.0000	0.9183	0.5949	0.3490	0.5124	0.7479	0.9379	1.0682
(7) Eureka	1.2205	0.0000	0.6835	2.7691	0.7517	1.8704	0.5823	0.7091	0.6453	0.9582	1.3225	1.2158
(17) White Pine	1.0454	1.0517	1.0351	1.6603	1.3798	1.5106	1.2064	0.9989	1.0887	2.3022	1.0628	1.6447
Mean	1.2064	0.7282	0.9639	1.8310	0.8105	1.3727	1.0320	0.8244	0.9259	1.4554	1.0709	1.3149
S.D.	0.7737	0.5488	0.6326	0.7456	0.5384	0.6315	0.7350	0.5323	0.6218	0.8921	0.6095	0.7244
Low Risk Area:												
(1) Carson City	2.3215	1.8815	2.0940	2.2644	1.4456	1.8104	1.9964	1.2728	1.5791	2.4847	1.6138	1.9775
(4) Douglas	0.3567	0.5734	0.4764	1.2176	0.8399	1.0039	1.2727	0.9335	1.0962	1.7871	0.7990	1.2501
(11) Lyon	2.4630	0.6495	1.5284	1.5693	1.4465	1.4946	1.8576	1.4852	1.6558	2.0715	1.2952	1.6728
(12) Mineral	1.4415	1.0716	1.2641	1.5482	1.2914	1.4300	1.8667	1.2077	1.5384	1.8711	1.9870	1.9393
(13) Nye	0.8139	1.5515	1.1797	1.4002	0.9316	1.2007	1.2190	1.2434	1.2262	1.6674	1.0061	1.3098
Mean	1.4793	1.1455	1.3085	1.5999	1.1910	1.3879	1.6425	1.2285	1.4191	1.9764	1.3402	1.6299
S.D.	0.8224	0.5070	0.5247	0.3553	0.2572	0.2736	0.3280	0.1764	0.2179	0.2863	0.4242	0.3050
State Total	1.7113	1.0982	1.3830	1.8219	1.2396	1.5034	2.0424	1.3372	1.6500	2.1573	1.4856	1.7729
U.S. Total	1.5590	1.0910	1.2970	1.5980	1.0880	1.3070	1.6450	1.1100	1.3300	1.6550	1.0920	1.3280

Rates are per 1,000 estimated population.

Table 18 panel 4

AGE-ADJUSTED DEATH RATES DUE OF CVA IN NEVADA RESIDENTS

	COUNTY	1968-69 MALE	1968-69 FEMALE	1968-69 BOTH	1970-74 MALE	1970-74 FEMALE	1970-74 BOTH	1975-79 MALE	1975-79 FEMALE	1975-79 BOTH	1980-83 MALE	1980-83 FEMALE	1980-83 BOTH
High Risk Area:													
(2)	Churchill	1.0983	0.3859	0.7361	1.0571	1.0832	1.0588	0.6805	0.5507	0.6141	0.3479	0.8732	0.6258
(3)	Clark	0.5333	0.4543	0.4960	1.0466	0.9041	0.9699	0.9277	0.8667	0.8549	0.5767	0.6562	0.5937
(8)	Humboldt	0.5439	0.5158	0.5142	1.4121	0.6712	1.0368	1.2201	0.7257	0.9729	0.6432	0.4836	0.5439
(9)	Lander	0.5986	0.0000	0.2828	1.4336	0.7434	1.0349	0.6466	0.1722	0.3970	0.7583	1.0100	0.8850
(10)	Lincoln	0.4496	1.5553	1.0078	1.2930	1.2866	1.2403	0.9989	0.3997	0.7011	0.1335	0.2876	0.2085
(13)	Nye	0.2776	0.7119	0.5253	0.8044	1.1709	0.9858	0.8892	0.9695	0.9053	0.7982	0.5717	0.6453
(14)	Pershing	1.1315	0.6226	0.8882	1.4979	0.4162	0.9600	1.1279	0.2196	0.6593	0.8213	0.4648	0.6430
(16)	Washoe	0.6090	0.5912	0.6005	1.1039	0.8865	0.9847	0.8293	0.7464	0.7783	0.5234	0.5173	0.5230
	Mean	0.6552	0.6046	0.6314	1.2061	0.8953	1.0339	0.9150	0.5813	0.7354	0.5753	0.6081	0.5835
	S.D.	0.2830	0.4123	0.2192	0.2254	0.2663	0.0848	0.1873	0.2767	0.1723	0.2230	0.2186	0.1754
Medium Risk Area:													
(5)	Elko	0.5393	0.2293	0.3816	0.7859	0.8083	0.8081	0.7793	0.7488	0.7556	0.5835	0.5730	0.5627
(6)	Esmeralda	0.0000	0.0000	0.0000	0.7306	3.3323	1.6974	0.2975	1.6785	1.1173	2.8837	0.7091	1.1368
(7)	Eureka	0.0000	0.0000	0.0000	0.3974	0.4655	0.4113	1.5496	1.1472	1.3498	0.2879	0.0000	0.1674
(17)	White Pine	1.4169	0.3144	0.8045	0.9384	0.6689	0.7826	1.2604	0.5680	0.8793	0.9844	0.9187	0.9534
	Mean	0.4891	0.1359	0.2965	0.7131	1.3188	0.9249	0.9717	1.0356	1.0255	1.1849	0.5502	0.7051
	S.D.	0.5792	0.1392	0.3321	0.1975	1.1689	0.4729	0.4767	0.4262	0.2279	1.0115	0.3407	0.3733
Low Rosk Area·													
(1)	Carson City	1.2625	0.5797	0.8682	0.6835	0.6534	0.6674	0.5251	0.4206	0.4557	0.6476	0.5705	0.5976
(4)	Douglas	1.1809	0.5678	0.8590	0.3456	0.6806	0.5209	0.1158	0.5034	0.3355	0.3224	0.3940	0.3577
(11)	Lyon	0.7996	0.5177	0.6342	0.7518	0.8739	0.8251	0.6473	0.5747	0.6136	0.3814	0.6032	0.4870
(12)	Mineral	0.5253	0.7752	0.6465	0.8374	0.9342	0.8959	0.5722	0.7731	0.6719	0.5010	0.3797	0.4501
(15)	Storey	1.5946	0.0000	0.7735	0.4956	0.0000	0.2174	0.0000	1.3821	0.7547	1.7784	0.3809	0.9353
	Mean	1.0726	0.4881	0.7563	0.6228	0.6284	0.6253	0.3721	0.7308	0.5663	0.7262	0.4657	0.5655
	S.D.	0.3727	0.2593	0.1003	0.1785	0.3323	0.2417	0.2620	0.3459	0.1513	0.5378	0.0996	0.2002
	State Total	0.6346	0.5038	0.5654	1.0289	0.8818	0.9492	0.8492	0.7595	0.7833	0.5644	0.5997	0.5730
	U.S. Total	0.7490	0.6330	0.6850	0.7270	0.5910	0.6500	0.5350	0.4420	0.4820	0.5350	0.3090	0.4080

Rates are per 1,000 estimated population.

Table 18 panel 5

AGE-ADJUSTED DEATH RATES DUE OF OTHER CAUSES IN NEVADA RESIDENTS

COUNTY	1968-69 MALE	1968-69 FEMALE	1968-69 BOTH	1970-74 MALE	1970-74 FEMALE	1970-74 BOTH	1975-79 MALE	1975-79 FEMALE	1975-79 BOTH	1980-83 MALE	1980-83 FEMALE	1980-83 BOTH
High Risk Area:												
(2) Churchill	5.9977	2.9407	4.4884	4.9298	1.5104	3.2095	4.2539	2.4099	3.3082	2.9913	2.2480	2.5971
(3) Clark	4.3879	2.4870	3.4136	3.5292	2.0328	2.7582	3.3968	1.8495	2.5763	3.5097	2.1461	2.7587
(8) Humboldt	7.9799	3.8617	5.9506	7.9466	2.7788	5.3802	5.1135	2.8950	4.0439	4.4395	2.1529	3.3189
(9) Lander	8.4512	4.9291	6.6795	6.2546	2.8273	4.4626	4.7109	3.5052	3.9896	4.5749	1.1896	2.8935
(10) Lincoln	3.7468	2.7874	3.2056	4.3975	1.8994	3.1078	5.0071	1.8468	3.3637	4.3730	1.5247	2.8826
(13) Nye	7.9909	4.2486	6.3014	6.1172	4.0033	5.1379	5.2679	2.9396	4.1021	4.5289	2.7902	3.6523
(14) Pershing	6.2263	3.8913	5.1070	8.4838	3.1262	5.7895	5.0361	2.7962	3.9178	5.9225	2.0931	4.0591
(16) Washoe	5.2641	2.9004	4.0030	3.9199	2.2116	3.0117	3.9382	2.1283	2.9675	3.3669	2.0235	2.6598
Mean	6.2556	3.5058	4.8936	5.6973	2.5487	4.1072	4.5906	2.5463	3.5336	4.2133	2.0210	3.1028
S.D.	1.6446	0.7979	1.2415	1.7121	0.7466	1.1437	0.6208	0.5507	0.5310	0.8612	0.4499	0.4906
Medium Risk Area:												
(5) Elko	5.9855	2.8833	4.3688	4.5143	1.9001	3.1907	6.5902	2.8434	4.6900	4.6146	2.1205	3.3642
(6) Esmeralda	9.7102	4.2716	6.5551	4.0251	1.3143	2.7398	7.6490	3.0740	5.3978	8.1800	2.5552	5.4732
(7) Eureka	10.2343	3.0681	7.0087	3.6972	2.2840	3.0197	3.1667	2.4478	2.8453	2.2722	1.4796	1.9951
(17) White Pine	4.2458	2.3478	3.2636	4.0302	1.8241	2.8804	5.0316	2.1323	3.5009	4.0614	2.7657	3.4086
Mean	7.5440	3.1427	5.2991	4.0667	1.8306	2.9577	5.6094	2.6244	4.1085	4.7821	2.2303	3.5603
S.D.	2.5118	0.7034	1.5418	0.2915	0.3453	0.1670	1.6899	0.3617	0.9957	2.1443	0.4919	1.2420
Low Risk Area:												
(1) Carson City	6.3782	4.0636	5.1513	3.7259	1.9727	2.7335	3.3905	1.9190	2.6482	3.5763	1.7121	2.6035
(4) Douglas	4.5145	2.1053	3.2634	3.4152	1.5216	2.4481	3.5155	2.0442	2.7194	2.4256	1.6459	2.0099
(11) Lyon	6.9719	2.4985	4.6426	2.9354	2.9746	3.9863	4.6007	2.7366	3.6057	3.9937	2.3085	3.1067
(12) Mineral	5.0963	4.1295	4.6366	6.0122	3.3118	4.6548	4.1717	2.6249	3.4134	6.1252	2.8945	4.5734
(15) Storey	7.3393	5.3075	5.9828	7.7960	4.2189	5.8343	6.7518	4.5595	5.6365	2.4370	1.3384	1.8665
Mean	6.0600	3.6209	4.7353	4.7769	2.7999	3.9314	4.4860	2.7768	3.6046	3.7116	1.9799	2.8320
S.D.	1.0851	1.1710	0.8848	1.8434	0.9617	1.2476	1.2155	0.9461	1.0829	1.3566	0.5548	0.9765
State Total	5.0468	2.7819	3.8743	3.9509	2.1421	3.0113	3.7841	2.0244	2.8554	3.5519	2.0998	2.7793

Rates are per 1,000 estimated population.

U.S. total not available.

Table 19

Mean yearly day-night average C-weighted sound level (in decibels) over the designated time periods between 1968-1983

County	period from 1968 - 1969 CNEL	period from 1970 - 1974 CNEL	period from 1975 - 1979 CNEL	period from 1980 - 1983 CNEL	Total* CNEL
Carson City	17.2	26.4	24.3	24.0	23.0
Churchill	29.6	35.5	41.4	39.8	36.6
Clark	34.7	35.3	41.4	40.2	37.9
Douglas	19.5	27.8	24.1	26.2	24.4
Elko	27.1	33.7	36.7	37.2	33.7
Esmeralda	27.8	36.9	36.4	37.5	34.7
Eurela	20.1	29.7	34.7	38.1	30.7
Humboldt	31.9	35.4	39.8	44.1	37.8
Lander	24.1	33.1	39.4	40.6	34.3
Lincoln	44.8	45.4	48.9	49.8	47.2
Lyon	23.7	31.2	28.8	28.4	28.0
Mineral	26.4	30.5	32.8	34.1	31.0
Nye	33.1	35.4	40.0	39.6	37.0
Pershing	44.2	41.3	43.5	44.8	43.5
Storey	18.9	28.2	26.0	25.8	24.7
Washoe	34.2	35.5	35.8	38.5	36.0
White Pine	24.2	31.0	38.5	39.6	33.3
Total*	28.3	33.7	36.0	37.0	33.7

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	28.322222	7.880248	17.200001	44.799999
2	time2	33.666668	4.716554	26.400000	45.400002
3	time3	36.027779	6.739595	24.100000	48.900002
4	time4	36.961113	6.931695	24.000000	49.799999

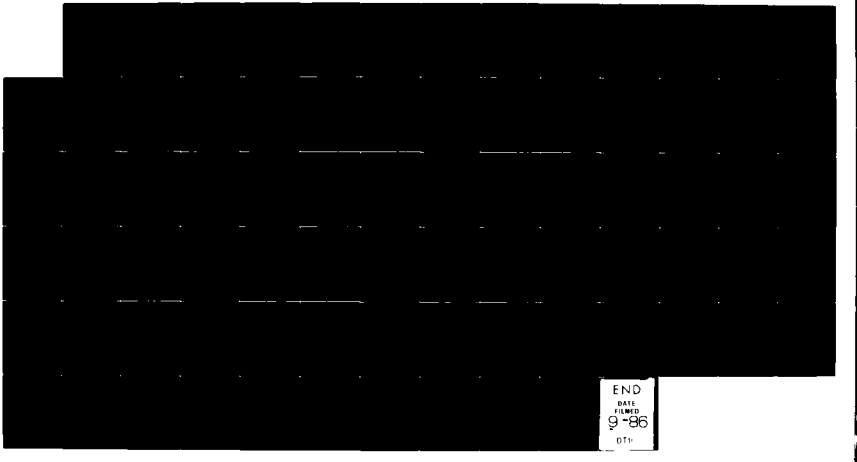
VARIABLE NO.	NAME	RANK SUM
1	time1	20.0
2	time2	44.0
3	time3	54.0
4	time4	62.0

FRIEDMAN TEST STATISTIC = 33.20. LEVEL OF SIGNIFICANCE = 0.0000
ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.6148

*Total denotes arithmetic average

AD-A170 953 EXPLORATORY STUDY OF THE POTENTIAL EFFECTS OF EXPOSURE TO SONIC BOOM ON H..(U) SYSTEMS RESEARCH LABS INC DAYTON OH H ANTON-GUIRGIS ET AL. JUN 86 2/2

UNCLASSIFIED AAMRL-TR-86-020-VOL-2 F33615-81-C-0500 F/G 6/19 NL



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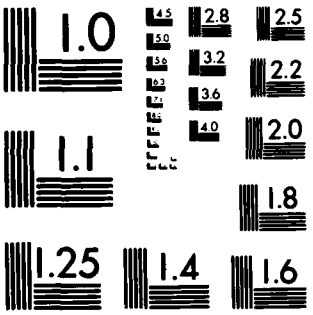

Table 20

Age-adjusted death rates due to all diseases (per thousand per year)
and the corresponding CLDN values (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969 Cldn	Rate	period from 1970 - 1974 Cldn	Rate	period from 1975 - 1979 Cldn	Rate	period from 1980 - 1983 Cldn	Rate	Total Cldn	Total Rate
Carson City	17.2	11.5347	26.4	8.4392	24.3	7.5784	24.0	8.3858	23.0	8.9845
Churchill	29.6	9.4213	35.5	9.1944	41.4	8.9115	39.8	8.1813	36.6	8.9271
Clark	34.7	7.5139	35.3	7.9846	41.4	7.9646	40.2	8.3666	37.9	7.9574
Douglas	19.5	7.5770	27.8	6.4894	24.1	6.8400	26.2	5.9287	24.4	6.7088
Elko	27.1	9.1134	33.7	8.5765	36.7	9.7314	37.2	7.9284	33.7	8.8374
Esmeralda	27.8	8.5340	36.9	9.0744	36.4	11.4959	37.5	11.4880	34.7	10.1481
Eureka	20.1	13.1697	29.7	7.4404	34.7	9.0708	38.1	6.8018	30.7	9.1207
Humboldt	31.9	11.0671	35.4	11.4836	39.8	10.1409	44.1	8.2718	37.8	10.2409
Lander	24.1	11.1938	33.1	10.5163	39.4	10.0417	40.6	9.0120	34.3	10.1910
Lincoln	44.8	10.2262	45.4	8.3638	48.9	8.6684	49.8	6.9806	47.2	8.5597
Lyon	23.7	8.7342	31.2	9.2902	28.8	8.2436	28.4	8.1015	28.0	8.5924
Mineral	26.4	9.1544	30.5	10.3246	32.8	8.1845	34.1	9.6888	31.0	9.3381
Nye	33.1	10.5597	35.4	10.2053	40.0	9.3090	39.6	8.0236	37.0	9.5244
Pershing	44.2	11.7248	41.3	12.4909	43.5	11.0070	44.8	8.9170	43.5	11.0349
Storey	18.9	15.5439	28.2	11.9249	26.0	14.1241	25.8	8.3282	24.7	12.4803
Washoe	34.2	9.2076	35.5	8.7593	35.8	8.6436	38.5	7.7017	36.0	8.5781
White Pine	24.2	7.3722	31.0	8.3882	38.5	8.6390	39.6	9.0032	33.3	8.3507
Total	28.3	10.0969	33.7	9.3498	36.0	9.3291	37.0	8.3005	33.7	9.2691

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	10.096444	2.086945	7.372000	15.543000
2	time2	9.349278	1.563469	6.489000	12.490000
3	time3	9.328668	1.663909	6.840000	14.124000
4	time4	8.300056	1.181435	5.928000	11.488000

VARIABLE NO.	NAME	RANK SUM
1	time1	57.0
2	time2	51.0
3	time3	43.0
4	time4	29.0

FRIEDMAN TEST STATISTIC = 14.66669
LEVEL OF SIGNIFICANCE = 0.0021 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.27161

Table 21

Age-adjusted death rates due to cardiovascular disease (per thousand per year)
and the corresponding CLDN vales (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969		period from 1970 - 1974		period from 1975 - 1979		period from 1980 - 1983		Total	Total
	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate
Carson City	17.2	3.3675	26.4	3.2120	24.3	2.8870	24.0	3.1836	23.0	3.1625
Churchill	29.6	2.4402	35.5	3.2906	41.4	3.1956	39.8	3.2471	36.6	3.0434
Clark	34.7	2.3260	35.3	2.7381	41.4	2.8631	40.2	3.1331	37.9	2.7651
Douglas	19.5	2.9782	27.8	2.5165	24.1	2.6888	26.2	2.3010	24.4	2.6211
Elko	27.1	3.3717	33.7	3.2911	36.7	2.7821	37.2	2.6215	33.7	3.0166
Esmeralda	27.8	0.7091	36.9	3.7188	36.4	4.4683	37.5	3.8099	34.7	3.1765
Eurela	20.1	5.4776	29.7	2.1390	34.7	4.2304	38.1	3.4234	30.7	3.8176
Humboldt	31.9	3.0433	35.4	3.7686	39.8	3.3891	44.1	2.7978	37.8	3.2497
Lander	24.1	3.4330	33.1	4.0687	39.4	4.1518	40.6	2.7600	34.3	3.6034
Lincoln	44.8	4.3320	45.4	3.0774	48.9	2.7698	49.8	2.6287	47.2	3.2020
Lyon	23.7	1.8572	31.2	2.9672	28.8	2.3510	28.4	2.8177	28.0	2.4983
Mineral	26.4	2.6072	30.5	3.3440	32.8	2.5273	34.1	2.5177	31.0	2.7491
Nye	33.1	2.5532	35.4	2.7689	40.0	3.0755	39.6	2.4162	37.0	2.7035
Pershing	44.2	4.0505	41.3	3.4443	43.5	4.5968	44.8	2.2735	43.5	3.5913
Storey	18.9	5.3314	28.2	3.4092	26.0	6.4140	25.8	3.8965	24.7	4.7628
Washoe	34.2	2.9642	35.5	3.1737	35.8	3.1127	38.5	2.8046	36.0	3.0138
White Pine	24.2	2.2690	31.0	3.2145	38.5	3.1519	39.6	2.9495	33.3	2.8962
Total	28.3	3.1242	33.7	3.1849	36.0	3.4503	37.0	2.9166	33.7	3.1690

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	3.124194	1.159715	0.709100	5.477600
2	time2	3.184861	0.456731	2.139000	4.068700
3	time3	3.450306	0.995845	2.351000	6.414000
4	time4	2.916578	0.465043	2.273500	3.896500

VARIABLE NO.	NAME	RANK SUM
1	time1	44.0
2	time2	52.0
3	time3	53.0
4	time4	31.0

FRIEDMAN TEST STATISTIC = 10.33334
LEVEL OF SIGNIFICANCE = 0.0159 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.19136

Table 22

Age-adjusted death rates due to hypertension (per thousand per year)
and the corresponding CLDN values (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969 Cldn	Rate	period from 1970 - 1974 Cldn	Rate	period from 1975 - 1979 Cldn	Rate	period from 1980 - 1983 Cldn	Rate	Total Cldn	Total Rate
Carson City	17.2	0.0538	26.4	0.0158	24.3	0.0084	24.0	0.0235	23.0	0.0254
Churchill	29.6	0.0000	35.5	0.0537	41.4	0.0277	39.8	0.0142	36.6	0.0239
Clark	34.7	0.0211	35.3	0.0290	41.4	0.0149	40.2	0.0213	37.9	0.0216
Douglas	19.5	0.0000	27.8	0.0000	24.1	0.0000	26.2	0.0099	24.4	0.0025
Elko	27.1	0.1241	33.7	0.0953	36.7	0.0465	37.2	0.0491	33.7	0.0788
Esmeralda	27.8	0.0000	36.9	0.0000	36.4	0.0000	37.5	0.0000	34.7	0.0000
Eureka	20.1	0.0000	29.7	0.0000	34.7	0.0000	38.1	0.0000	30.7	0.0000
Humboldt	31.9	0.0924	35.4	0.0710	39.8	0.0236	44.1	0.0212	37.8	0.0520
Lander	24.1	0.0000	33.1	0.0000	39.4	0.0000	40.6	0.0000	34.3	0.0000
Lincoln	44.8	0.1851	45.4	0.0000	48.9	0.0000	49.8	0.0000	47.2	0.0463
Lyon	23.7	0.0718	31.2	0.0670	28.8	0.0174	28.4	0.0174	28.0	0.0434
Mineral	26.4	0.0000	30.5	0.0000	32.8	0.0335	34.1	0.2082	31.0	0.0604
Nye	33.1	0.0000	35.4	0.1120	40.0	0.0000	39.6	0.0000	37.0	0.0280
Pershing	44.2	0.0000	41.3	0.1308	43.5	0.0000	44.8	0.0000	43.5	0.0327
Storey	18.9	0.0000	28.2	0.0000	26.0	0.0000	25.8	0.0000	24.7	0.0000
Washoe	34.2	0.0150	35.5	0.0197	35.8	0.0095	38.5	0.0131	36.0	0.0143
White Pine	24.2	0.0000	31.0	0.0000	38.5	0.0181	39.6	0.0470	33.3	0.0163
Total	28.3	0.0331	33.7	0.0350	36.0	0.0117	37.0	0.0250	33.7	0.0262

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	0.033133	0.053278	0.000000	0.185100
2	time2	0.034961	0.043285	0.000000	0.130800
3	time3	0.011739	0.013887	0.000000	0.046500
4	time4	0.024994	0.048250	0.000000	0.208200

VARIABLE NO.	NAME	RANK SUM
1	time1	48.0
2	time2	52.0
3	time3	35.5
4	time4	44.5

FRIEDMAN TEST STATISTIC = 4.95001
LEVEL OF SIGNIFICANCE = 0.1755 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.09167

Table 23

Age-adjusted death rates due to cancer (per thousand per year)
and the corresponding CLDN values (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969 Cldn	Rate	period from 1970 - 1974 Cldn	Rate	period from 1975 - 1979 Cldn	Rate	period from 1980 - 1983 Cldn	Rate	Total Cldn	Total Rate
Carson City	17.2	2.0940	26.4	1.8104	24.3	1.5791	24.0	1.9775	23.0	1.8653
Churchill	29.6	1.7566	35.5	1.5819	41.4	1.7659	39.8	1.6971	36.6	1.7004
Clark	34.7	1.2572	35.3	1.4894	41.4	1.6554	40.2	1.8597	37.9	1.5654
Douglas	19.5	0.4764	27.8	1.0039	24.1	1.0962	26.2	1.2501	24.4	0.9567
Elko	27.1	0.8672	33.7	1.1913	36.7	1.4572	37.2	1.3308	33.7	1.2116
Esmeralda	27.8	1.2698	36.9	0.9183	36.4	0.5124	37.5	1.0682	34.7	0.9422
Eureka	20.1	0.6835	29.7	1.8704	34.7	0.6453	38.1	1.2158	30.7	1.1038
Humboldt	31.9	1.4667	35.4	1.2269	39.8	1.7114	44.1	1.5899	37.8	1.4987
Lander	24.1	0.7985	33.1	0.9500	39.4	1.5033	40.6	2.4736	34.3	1.4314
Lincoln	44.8	1.4958	45.4	0.9384	48.9	1.8339	49.8	1.2608	47.2	1.3822
Lyon	23.7	1.5284	31.2	1.4946	28.8	1.6558	28.4	1.6728	28.0	1.5879
Mineral	26.4	1.2641	30.5	1.4300	32.8	1.5384	34.1	1.9393	31.0	1.5430
Nye	33.1	1.1797	35.4	1.2007	40.0	1.2262	39.6	1.3098	37.0	1.2291
Pershing	44.2	1.6790	41.3	2.1663	43.5	1.8312	44.8	1.9415	43.5	1.9050
Storey	18.9	3.4562	28.2	2.4640	26.0	1.3189	25.8	1.6299	24.7	2.2172
Washoe	34.2	1.6250	35.5	1.5696	35.8	1.7756	38.5	1.7012	36.0	1.6679
White Pine	24.2	1.0351	31.0	1.5106	38.5	1.0887	39.6	1.6447	33.3	1.3198
Total	28.3	1.4078	33.7	1.4598	36.0	1.4233	37.0	1.6213	33.7	1.4781

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	1.407833	0.652771	0.476400	3.456200
2	time2	1.459806	0.424117	0.918300	2.464000
3	time3	1.423344	0.384847	0.512400	1.833900
4	time4	1.621333	0.347232	1.068200	2.473600

VARIABLE NO.	NAME	RANK SUM
1	time1	35.0
2	time2	38.0
3	time3	48.0
4	time4	59.0

FRIEDMAN TEST STATISTIC = 11.80002
LEVEL OF SIGNIFICANCE = 0.0081 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.21852

Table 24

Age-adjusted death rates due to cerebrovascular accident (per thousand per year)
and the corresponding CLDN values (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969		period from 1970 - 1974		period from 1975 - 1979		period from 1980 - 1983		Total	Total
	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate
Carson City	17.2	0.8682	26.4	0.6674	24.3	0.4557	24.0	0.5976	23.0	0.6472
Churchill	29.6	0.7361	35.5	1.0588	41.4	0.6141	39.8	0.6258	36.6	0.7587
Clark	34.7	0.4960	35.3	0.9699	41.4	0.8549	40.2	0.5937	37.9	0.7286
Douglas	19.5	0.8590	27.8	0.5209	24.1	0.3355	26.2	0.3577	24.4	0.5183
Elko	27.1	0.3816	33.7	0.8081	36.7	0.7556	37.2	0.5627	33.7	0.6270
Esmeralda	27.8	0.0000	36.9	1.6974	36.4	1.1173	37.5	1.1368	34.7	0.9879
Eurela	20.1	0.0000	29.7	0.4113	34.7	1.3498	38.1	0.1674	30.7	0.4821
Humboldt	31.9	0.5142	35.4	1.0368	39.8	0.9729	44.1	0.5439	37.8	0.7670
Lander	24.1	0.2828	33.1	1.0349	39.4	0.3970	40.6	0.8850	34.3	0.6499
Lincoln	44.8	1.0078	45.4	1.2403	48.9	0.7011	49.8	0.2085	47.2	0.7094
Lyon	23.7	0.6342	31.2	0.8251	28.8	0.6136	28.4	0.4870	28.0	0.6400
Mineral	26.4	0.6465	30.5	0.8959	32.8	0.6719	34.1	0.4501	31.0	0.6661
Nye	33.1	0.5253	35.4	0.9858	40.0	0.9053	39.6	0.6453	37.0	0.7654
Pershing	44.2	0.8882	41.3	0.9600	43.5	0.6593	44.8	0.6430	43.5	0.7876
Storey	18.9	0.7735	28.2	0.2174	26.0	0.7547	25.8	0.9353	24.7	0.6702
Washoe	34.2	0.6005	35.5	0.9847	35.8	0.7783	38.5	0.5230	36.0	0.7216
White Pine	24.2	0.8045	31.0	0.7826	38.5	0.8793	39.6	0.9534	33.3	0.8550
Total	28.3	0.5893	33.7	0.8881	36.0	0.7539	37.0	0.6068	33.7	0.7095

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	0.589317	0.284117	0.000000	1.007800
2	time2	0.888078	0.322201	0.217400	1.697400
3	time3	0.753900	0.246578	0.335500	1.349800
4	time4	0.606833	0.249157	0.167400	1.136800

VARIABLE NO.	NAME	RANK SUM
1	time1	37.0
2	time2	63.0
3	time3	43.0
4	time4	37.0

FRIEDMAN TEST STATISTIC = 15.20001
LEVEL OF SIGNIFICANCE = 0.0017 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.28148

Table 25

Age-adjusted death rates due to other diseases (per thousand per year)
and the corresponding CLDN values (in decibels)
over the designated time periods between 1968-1983

County	period from 1968 - 1969		period from 1970 - 1974		period from 1975 - 1979		period from 1980 - 1983		Total	Total
	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate	Cldn	Rate
Carson City	17.2	5.1513	26.4	2.7335	24.3	2.6482	24.0	2.6035	23.0	3.2841
Churchill	29.6	4.4884	35.5	3.2095	41.4	3.3082	39.8	2.5971	36.6	3.4008
Clark	34.7	3.4136	35.3	2.7582	41.4	2.5763	40.2	2.7587	37.9	2.8767
Douglas	19.5	3.2634	27.8	2.4481	24.1	2.7194	26.2	2.0099	24.4	2.6102
Elko	27.1	4.3688	33.7	3.1907	36.7	4.6900	37.2	3.3642	33.7	3.9034
Esmeralda	27.8	6.5551	36.9	2.7398	36.4	5.3978	37.5	5.4732	34.7	5.0415
Eureka	20.1	7.0087	29.7	3.0197	34.7	2.8453	38.1	1.9951	30.7	3.7172
Humboldt	31.9	5.9506	35.4	5.3802	39.8	4.0439	44.1	3.3189	37.8	4.6734
Lander	24.1	6.6795	33.1	4.4626	39.4	3.9896	40.6	2.8935	34.3	4.5063
Lincoln	44.8	3.2056	45.4	3.1078	48.9	3.3637	49.8	2.8826	47.2	3.1399
Lyon	23.7	4.6426	31.2	3.9363	28.8	3.6057	28.4	3.1067	28.0	3.8228
Mineral	26.4	4.6366	30.5	4.6548	32.8	3.4134	34.1	4.5734	31.0	4.3196
Nye	33.1	6.3014	35.4	5.1379	40.0	4.1021	39.6	3.6523	37.0	4.7984
Pershing	44.2	5.1070	41.3	5.7895	43.5	3.9178	44.8	4.0591	43.5	4.7184
Storey	18.9	5.9828	28.2	5.8343	26.0	5.6365	25.8	1.8665	24.7	4.8300
Washoe	34.2	4.0030	35.5	3.0117	35.8	2.9675	38.5	2.6598	36.0	3.1605
White Pine	24.2	3.2636	31.0	2.8804	38.5	3.5009	39.6	3.4086	33.3	3.2634
Total	28.3	4.9425	33.7	3.7821	36.0	3.6898	37.0	3.1308	33.7	3.8863

VARIABLE NO.	NAME	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
1	time1	4.942472	1.248447	1.205600	7.008700
2	time2	3.782061	1.138001	2.448100	5.834300
3	time3	3.689783	0.875048	2.576300	5.636500
4	time4	3.130772	0.909267	1.866500	5.473200

VARIABLE NO.	NAME	RANK SUM
1	time1	66.0
2	time2	46.0
3	time3	41.0
4	time4	27.0

FRIEDMAN TEST STATISTIC = 26.06668
LEVEL OF SIGNIFICANCE = 0.0000 ASSUMING CHI-SQUARE DISTRIBUTION WITH 3 DEGREES OF FREEDOM
KENDALL COEFFICIENT OF CONCORDANCE = 0.48272

Table 26

CORRELATION BETWEEN CRUDE DEATH RATE
AND SONIC BOOM EXPOSURE

	ALL TOWNSHIPS				HIGH RISK AREA (Cldn => 36.00 dB) Death Rate (8.669 +/- 2.531)				MEDIUM RISK AREA (31.00 dB <= Mean Cldn <36.00 dB) Death Rate (7.853 +/- 2.812)				LOW RISK AREA (Cldn < 31.00 dB) Death Rate (7.371 +/- 3.092)			
	N	r	r^2	p-value	N	r	r^2	p-value	N	r	r^2	p-value	N	r	r^2	p-value
ALL AIRCRAFT:	868				341				243				284			
Event		0.084	0.007	0.013		0.098	0.010	0.070		-0.058	0.003	0.368		0.155	0.024	0.009
Pressure		-0.067	0.004	0.048		-0.124	0.015	0.022		-0.132	0.017	0.039		-0.152	0.023	0.010
Cldn		0.126	0.016	<0.001		0.032	0.001	0.557		0.015	<0.001	0.810		0.234	0.055	<0.001
FIGHTER:	868				130				25				713			
Event		0.078	0.006	0.021		0.184	0.034	0.034		0.517	0.267	0.005		-0.032	0.001	0.386
Pressure		-0.034	0.001	0.316		-0.060	0.004	0.498		0.070	0.005	0.732		-0.044	0.002	0.235
Carpet		-0.073	0.005	0.031		0.005	<0.001	0.954		0.077	0.006	0.704		0.088	0.008	0.018
Cldn		-0.064	0.004	0.060		-0.008	<0.001	0.925		0.481	0.231	0.010		-0.144	0.021	<0.001
SR71:	869				234				256				378			
Event		0.177	0.031	<0.001		0.272	0.074	<0.001		0.059	0.003	0.346		0.247	0.061	<0.001
Pressure		0.067	0.004	0.049		-0.170	0.029	0.009		0.074	0.005	0.234		0.146	0.021	0.004
Carpet		0.056	0.003	0.101		0.149	0.022	0.022		-0.091	0.008	0.144		0.107	0.011	0.036
Cldn		0.201	0.040	<0.001		0.078	0.006	0.236		0.052	0.003	0.403		0.321	0.103	<0.001

N = Sample Size
r = Correlation Coefficient
r^2 = Goodness-of-Fit
Cldn = Day-Night C-weighted average sound level

Table 27 (page 1)

ASSOCIATION BETWEEN AGE-ADJUSTED DEATH RATES
AND SONIC BOOM EXPOSURE
NEVADA: 1969-1983

	CARDIOVASCULAR	HYPERTENSION	CANCER	CVA	OTHERS	ALL CAUSES
Death Rate (Mean +/- S.D.) per 1,000 population:						
Male:	3.9341 +/- 0.1358	0.0251 +/- 0.0110	1.9332 +/- 0.1759	0.7693 +/- 0.1830	4.0834 +/- 0.5740	10.7451 +/- 0.3560
Female:	2.0076 +/- 0.2134	0.0212 +/- 0.0044	1.2902 +/- 0.1413	0.6862 +/- 0.1452	2.2621 +/- 0.3031	6.2672 +/- 0.1453
Both:	2.8981 +/- 0.1360	0.0227 +/- 0.0058	1.5773 +/- 0.1473	0.7177 +/- 0.1597	3.1301 +/- 0.4377	8.3460 +/- 0.1515

	CARDIOVASCULAR			HYPERTENSION			CANCER			CVA			OTHERS			ALL CAUSES		
	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value
ALL AIRCRAFT (N=68):																		
Male:																		
Event	-0.089	0.008	0.464	0.223	0.050	0.063	-0.050	0.003	0.685	-0.079	0.006	0.518	-0.126	0.016	0.299	-0.148	0.022	0.223
Pressure	-0.111	0.012	0.362	0.013	<0.001	0.916	-0.113	0.013	0.352	0.005	<0.001	0.968	-0.251	0.063	0.036	-0.245	0.060	0.040
Cldn	-0.092	0.008	0.452	0.108	0.012	0.377	-0.058	0.003	0.633	0.016	<0.001	0.894	-0.174	0.030	0.151	-0.168	0.028	0.165
Female:																		
Event	0.059	0.003	0.626	-0.143	0.020	0.240	0.038	0.001	0.756	0.063	0.004	0.607	-0.189	0.036	0.118	-0.048	0.002	0.694
Pressure	-0.009	<.001	0.943	-0.129	0.017	0.288	0.070	0.005	0.567	0.071	0.005	0.561	-0.273	0.075	0.022	-0.125	0.016	0.304
Cldn	0.029	0.001	0.811	-0.069	0.005	0.572	-0.030	0.001	0.807	0.191	0.036	0.114	-0.293	0.086	0.013	-0.112	0.013	0.355
Both:																		
Event	-0.045	0.002	0.709	0.075	0.006	0.539	-0.022	<0.001	0.854	0.001	<0.001	0.993	-0.165	0.027	0.173	-0.141	0.020	0.244
Pressure	-0.120	0.014	0.324	-0.057	0.003	0.642	-0.037	0.001	0.765	0.015	<0.001	0.902	-0.274	0.075	0.022	-0.258	0.067	0.031
Cldn	-0.052	0.003	0.672	0.031	0.001	0.802	-0.045	0.002	0.713	0.163	0.027	0.177	-0.214	0.046	0.075	-0.158	0.025	0.191

Table 27 (page 2)

FIGHTER (N=68):																		
Male:																		
Event	-0.087	0.008	0.477	0.224	0.050	0.063	-0.055	0.003	0.650	-0.082	0.007	0.500	-0.124	0.015	0.306	-0.147	0.022	0.224
Pressure	0.021	<0.001	0.863	0.100	0.010	0.411	-0.189	0.036	0.118	0.151	0.023	0.214	-0.005	<0.001	0.966	-0.008	<0.001	0.945
Carpet	-0.009	<0.001	0.942	0.188	0.035	0.120	-0.119	0.014	0.326	0.141	0.020	0.246	-0.033	0.001	0.784	-0.025	0.001	0.836
Cldn	-0.073	0.005	0.548	0.219	0.048	0.068	-0.135	0.018	0.265	0.031	0.001	0.798	-0.092	0.008	0.450	-0.118	0.014	0.331
Female:																		
Event	0.057	0.003	0.642	-0.143	0.020	0.238	0.036	0.001	0.765	0.063	0.004	0.606	-0.186	0.035	0.124	-0.049	0.002	0.691
Pressure	-0.007	<0.001	0.952	0.054	0.003	0.660	-0.115	0.013	0.345	0.385	0.148	<0.001	-0.080	0.006	0.513	0.028	0.001	0.817
Carpet	0.034	0.001	0.780	0.122	0.015	0.317	-0.126	0.016	0.300	0.346	0.120	0.003	-0.078	0.006	0.520	0.039	0.002	0.749
Cldn	-0.021	<0.001	0.862	-0.043	0.002	0.727	-0.038	0.001	0.753	0.226	0.051	0.060	-0.109	0.012	0.370	-0.022	<0.001	0.854
Both:																		
Event	-0.045	0.002	0.714	0.075	0.006	0.540	-0.027	0.001	0.825	-0.002	<0.001	0.984	-0.163	0.027	0.179	-0.141	0.020	0.244
Pressure	-0.014	<0.001	0.909	0.093	0.009	0.445	-0.170	0.029	0.160	0.364	0.132	0.002	-0.018	<0.001	0.881	-0.001	<0.001	0.996
Carpet	-0.006	<0.001	0.959	0.189	0.036	0.117	-0.136	0.018	0.261	0.348	0.121	0.003	-0.040	0.002	0.742	-0.004	<0.001	0.976
Cldn	-0.089	0.008	0.465	0.125	0.016	0.306	-0.113	0.013	0.352	0.180	0.032	0.136	-0.100	0.010	0.410	-0.110	0.012	0.368
SR71 (N=68)																		
Male:																		
Event	-0.097	0.009	0.428	0.002	<0.001	0.988	0.209	0.044	0.083	0.124	0.015	0.309	-0.069	0.005	0.573	-0.022	<0.001	0.856
Pressure	-0.054	0.003	0.658	-0.194	0.038	0.108	0.064	0.004	0.599	-0.054	0.003	0.657	-0.330	0.109	0.005	-0.242	0.059	0.043
Carpet	0.025	0.001	0.837	0.215	0.046	0.074	-0.092	0.008	0.448	0.080	0.006	0.512	0.342	0.117	0.004	0.234	0.055	0.051
Cldn	-0.012	<0.001	0.919	-0.044	0.002	0.716	-0.029	0.001	0.815	0.075	0.006	0.537	-0.070	0.005	0.566	-0.047	0.002	0.703
Female:																		
Event	0.102	0.010	0.404	0.016	<0.001	0.898	0.055	0.003	0.651	-0.004	<0.001	0.973	-0.112	0.013	0.358	0.013	<0.001	0.913
Pressure	0.079	0.006	0.515	-0.073	0.005	0.552	0.166	0.028	0.170	-0.111	0.012	0.359	-0.294	0.086	0.013	-0.104	0.011	0.391
Carpet	-0.118	0.014	0.332	0.097	0.009	0.428	-0.174	0.030	0.150	0.105	0.011	0.387	0.277	0.077	0.020	0.067	0.004	0.583
Cldn	0.037	0.001	0.761	0.024	0.001	0.844	-0.034	0.001	0.778	0.127	0.016	0.296	-0.246	0.061	0.039	-0.099	0.010	0.418
Both:																		
Event	-0.029	0.001	0.811	0.006	<0.001	0.960	0.166	0.028	0.169	0.125	0.016	0.305	-0.081	0.007	0.505	-0.005	<0.001	0.967
Pressure	-0.016	<0.001	0.895	-0.164	0.027	0.174	0.143	0.020	0.238	-0.158	0.025	0.192	-0.335	0.112	0.004	-0.235	0.055	0.050
Carpet	-0.028	0.001	0.816	0.194	0.038	0.109	-0.164	0.027	0.175	0.161	0.026	0.183	0.338	0.114	0.004	0.212	0.045	0.079
Cldn	0.028	0.001	0.820	-0.023	0.001	0.851	-0.010	<0.001	0.933	0.152	0.023	0.209	-0.117	0.014	0.338	-0.046	0.002	0.709

Table 28 (page 1)

ASSOCIATION BETWEEN AGE-ADJUSTED DEATH RATES AND SONIC BOOM EXPOSURE IN HIGH RISK AREA NEVADA: 1969-1983

	CARDIOVASCULAR			HYPERTENSION			CANCER			CVA			OTHERS			ALL CAUSES		
	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value
ALL AIRCRAFT (N=34):																		
Male:																		
Event	-0.170	0.029	0.324	0.267	0.071	0.116	-0.093	0.009	0.593	-0.160	0.026	0.354	-0.143	0.020	0.408	-0.232	0.054	0.175
Pressure	-0.202	0.041	0.240	-0.011	<0.001	0.949	-0.229	0.052	0.181	0.018	<0.001	0.919	-0.125	0.016	0.470	-0.240	0.058	0.159
Cldn	-0.301	0.091	0.074	0.113	0.013	0.514	0.248	0.062	0.146	-0.127	0.016	0.464	-0.289	0.084	0.088	-0.309	0.095	0.066
Female:																		
Event	0.115	0.013	0.509	-0.244	0.060	0.152	0.045	0.002	0.797	-0.024	0.001	0.892	-0.240	0.058	0.160	-0.080	0.006	0.647
Pressure	-0.142	0.020	0.412	-0.286	0.082	0.091	0.111	0.012	0.521	-0.073	0.005	0.676	-0.191	0.036	0.267	-0.206	0.042	0.231
Cldn	0.189	0.036	0.272	-0.271	0.073	0.110	0.185	0.034	0.283	-0.206	0.042	0.229	-0.260	0.068	0.126	-0.074	0.005	0.672
Both:																		
Event	-0.094	0.009	0.587	0.140	0.020	0.417	-0.067	0.004	0.700	-0.115	0.013	0.505	-0.207	0.043	0.227	-0.236	0.056	0.167
Pressure	-0.310	0.096	0.065	-0.105	0.011	0.545	-0.109	0.012	0.530	-0.107	0.011	0.537	-0.164	0.027	0.341	-0.316	0.100	0.061
Cldn	-0.189	0.036	0.272	0.005	<0.001	0.976	0.250	0.063	0.142	-0.225	0.051	0.189	-0.324	0.105	0.053	-0.305	0.093	0.070
FIGHTER (N=12):																		
Male:																		
Event	0.130	0.017	0.665	0.180	0.032	0.546	0.091	0.008	0.763	-0.176	0.031	0.555	-0.187	0.035	0.531	-0.124	0.015	0.678
Pressure	-0.318	0.101	0.274	-0.442	0.195	0.115	-0.188	0.035	0.529	0.086	0.007	0.776	0.275	0.076	0.349	0.003	<0.001	0.993
Carpet	-0.455	0.207	0.103	-0.589	0.347	0.025	-0.335	0.112	0.247	-0.055	0.003	0.855	0.293	0.086	0.317	-0.185	0.034	0.534
Cldn	0.202	0.041	0.497	-0.055	0.003	0.856	0.525	0.276	0.053	-0.017	<0.001	0.955	-0.601	0.361	0.021	-0.372	0.138	0.195

Female:																	
Event	0.508	0.258	0.063	-0.433	0.187	0.124	0.163	0.027	0.586	-0.151	0.023	0.614	-0.527	0.278	0.052	-0.190	0.036	0.523
Pressure	-0.087	0.008	0.773	0.140	0.020	0.641	0.303	0.092	0.300	-0.194	0.038	0.515	0.120	0.014	0.688	0.100	0.010	0.739
Carpet	0.011	<0.001	0.970	-0.392	0.154	0.169	0.448	0.201	0.110	-0.529	0.280	0.051	-0.165	0.027	0.580	-0.149	0.022	0.619
Cldn	0.431	0.186	0.127	-0.365	0.133	0.204	0.240	0.058	0.416	-0.252	0.064	0.394	-0.858	0.736	<0.001	-0.480	0.230	0.083
Both:																		
Event	0.303	0.092	0.299	0.684	0.007	0.781	0.164	0.027	0.584	-0.195	0.038	0.513	-0.351	0.123	0.225	-0.203	0.041	0.494
Pressure	-0.263	0.069	0.372	-0.388	0.151	0.174	0.091	0.008	0.763	-0.107	0.011	0.722	0.225	0.051	0.448	0.073	0.005	0.809
Carpet	-0.326	0.106	0.261	-0.633	0.401	0.013	0.073	0.005	0.809	-0.400	0.160	0.160	0.111	0.012	0.712	-0.155	0.024	0.605
Cldn	0.234	0.055	0.429	-0.124	0.015	0.678	0.495	0.245	0.072	-0.196	0.038	0.511	-0.744	0.554	0.001	-0.542	0.294	0.044
S971 (N=26):																		
Male:																		
Event	-0.516	0.266	0.004	0.246	0.061	0.209	0.642	0.412	<0.001	-0.030	0.001	0.882	-0.009	<0.001	0.966	-0.109	0.012	0.583
Pressure	0.009	<0.001	0.966	-0. 51	0.023	0.448	0.018	<0.001	0.927	0.008	<0.001	0.970	-0.142	0.020	0.473	-0.076	0.006	0.702
Carpet	-0.052	0.003	0.794	0.181	0.033	0.359	-0.103	0.011	0.606	0.006	<0.001	0.978	0.178	0.032	0.368	0.059	0.003	0.767
Cldn	-0.165	0.027	0.404	0.120	0.014	0.546	0.644	0.415	<0.001	-0.019	<0.001	0.925	-0.077	0.006	0.700	0.024	0.001	0.906
Female:																		
Event	0.335	0.112	0.082	0.123	0.015	0.537	0.049	0.002	0.806	-0.333	0.111	0.083	0.338	0.114	0.078	0.283	0.080	0.146
Pressure	-0.194	0.038	0.325	-0.231	0.053	0.239	0.263	0.069	0.178	-0.211	0.045	0.285	-0.167	0.028	0.399	-0.230	0.053	0.242
Carpet	0.195	0.038	0.323	0.230	0.053	0.241	-0.309	0.095	0.110	0.227	0.052	0.247	0.160	0.026	0.419	0.212	0.045	0.282
Cldn	0.316	0.100	0.102	-0.034	0.001	0.865	0.237	0.056	0.226	-0.297	0.088	0.126	0.177	0.031	0.370	0.286	0.082	0.141
Both:																		
Event	-0.289	0.078	0.156	0.209	0.040	0.312	0.422	0.178	0.024	-0.186	0.035	0.346	0.099	0.010	0.620	0.031	0.001	0.878
Pressure	-0.134	0.018	0.494	0.188	0.035	0.342	0.192	0.037	0.332	-0.238	0.057	0.225	-0.157	0.025	0.430	-0.163	0.027	0.412
Carpet	0.089	0.008	0.655	0.208	0.043	0.291	-0.277	0.077	0.154	0.245	0.060	0.211	0.184	0.034	0.352	0.139	0.019	0.483
Cldn	0.057	0.003	0.774	0.255	0.003	0.782	0.602	0.362	<0.001	-0.195	0.038	0.322	0.002	.000	0.990	0.153	0.023	0.441

The age adjusted death rates used in this analysis are presented in Table 3-3E.

Table 29

ASSOCIATION BETWEEN AGE-ADJUSTED DEATH RATE AND SONIC BOOM EXPOSURE IN MEDIUM RISK AREA
NEVADA: 1969-1983

	CARDIOVASCULAR			HYPERTENSION			CANCER			CVA			OTHERS			ALL CAUSES		
	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value
ALL AIRCRAFT (N=12):																		
Male:																		
Event	-0.044	0.002	0.885	0.587	0.345	0.026	-0.039	0.002	0.896	0.377	0.142	0.188	0.095	0.009	0.752	0.107	0.011	0.721
Pressure	-0.341	0.116	0.239	-0.118	0.014	0.695	0.275	0.076	0.350	0.019	<0.001	0.951	-0.216	0.047	0.466	-0.273	0.075	0.353
Cldn	0.022	<0.001	0.941	0.082	0.007	0.785	-0.111	0.012	0.712	0.679	0.461	0.006	0.024	0.001	0.936	0.117	0.014	0.696
Female:																		
Event	0.301	0.091	0.302	0.110	0.012	0.714	0.116	0.013	0.700	0.176	0.031	0.555	-0.045	0.002	0.882	0.241	0.058	0.415
Pressure	0.025	0.001	0.934	0.245	0.060	0.407	0.454	0.206	0.105	-0.049	0.002	0.872	0.040	0.002	0.895	0.308	0.095	0.291
Cldn	0.522	0.272	0.055	0.135	0.018	0.652	-0.053	0.003	0.861	0.431	0.186	0.127	-0.126	0.016	0.674	0.271	0.073	0.356
Both:																		
Event	-0.018	<0.001	0.952	0.324	0.105	0.264	-0.055	0.003	0.856	0.333	0.111	0.252	0.041	0.002	0.891	0.115	0.013	0.702
Pressure	-0.319	0.102	0.273	0.121	0.015	0.687	0.431	0.186	0.126	-0.014	<0.001	0.962	-0.171	0.029	0.567	-0.197	0.039	0.509
Cldn	0.199	0.040	0.503	0.127	0.016	0.671	-0.087	0.008	0.773	0.621	0.386	0.016	-0.027	0.001	0.927	0.187	0.035	0.529
SR71 (N=15):																		
Male:																		
Event	-0.158	0.025	0.550	0.415	0.172	0.098	0.215	0.046	0.414	0.400	0.160	0.113	-0.156	0.024	0.556	-0.087	0.008	0.744
Pressure	-0.277	0.077	0.287	0.001	<0.001	0.996	0.148	0.022	0.576	-0.085	0.007	0.749	-0.260	0.068	0.319	-0.306	0.094	0.237
Carpet Area	0.253	0.064	0.334	0.090	0.008	0.735	-0.117	0.014	0.660	0.044	0.002	0.869	0.317	0.100	0.219	0.336	0.113	0.191
Cldn	0.049	0.002	0.855	0.032	0.001	0.904	-0.265	0.070	0.310	0.694	0.482	0.001	0.089	0.008	0.738	0.152	0.023	0.567
Female:																		
Event	0.291	0.085	0.261	-0.056	0.000	0.835	0.249	0.062	0.342	0.268	0.072	0.305	-0.183	0.033	0.489	0.194	0.038	0.462
Pressure	-0.221	0.049	0.400	0.432	0.187	0.083	0.422	0.178	0.092	-0.082	0.007	0.759	0.001	<0.001	0.996	0.138	0.019	0.604
Carpet Area	0.213	0.045	0.419	-0.316	0.100	0.221	-0.366	0.134	0.150	0.015	<0.001	0.954	0.026	0.001	0.921	-0.102	0.010	0.703
Cldn	0.498	0.248	0.041	0.132	0.017	0.621	-0.112	0.013	0.675	0.323	0.104	0.209	-0.116	0.013	0.663	0.176	0.031	0.505
Both:																		
Event	-0.135	0.018	0.563	0.155	0.024	0.559	0.248	0.062	0.344	0.377	0.142	0.138	-0.194	0.038	0.461	-0.099	0.010	0.710
Pressure	-0.268	0.072	0.303	0.300	0.090	0.247	0.346	0.120	0.177	-0.083	0.007	0.755	-0.195	0.038	0.460	-0.218	0.048	0.407
Carpet Area	0.238	0.057	0.363	-0.175	0.031	0.507	-0.290	0.084	0.264	0.028	0.001	0.916	0.247	0.061	0.345	0.253	0.064	0.334
Cldn	0.235	0.055	0.371	0.104	0.011	0.697	-0.194	0.038	0.462	0.593	0.352	0.011	0.027	0.001	0.920	0.211	0.045	0.422

No sample was available for the exposure to fighterplane.

The age-adjusted death rates used for this analysis are presented in Table 3-3E.

Table 30 (page 1)

ASSOCIATION BETWEEN AGE-ADJUSTED DEATH RATES
AND SONIC BOOM EXPOSURE IN LOW RISK AREA
NEVADA: 1969-1983

	CARDIOVASCULAR			HYPERTENSION			CANCER			CVA			OTHERS			ALL CAUSES		
	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value	r	r^2	p-value
ALL AIRCRAFT (N=22):																		
Male:																		
Event	0.103	0.011	0.637	0.604	0.365	0.001	-0.207	0.043	0.336	-0.104	0.011	0.631	0.106	0.011	0.624	0.057	0.003	0.792
Pressure	0.035	0.001	0.872	0.097	0.009	0.654	-0.119	0.014	0.584	-0.226	0.051	0.293	-0.554	0.307	0.004	-0.391	0.153	0.058
Cldn	-0.492	0.242	0.014	-0.050	0.003	0.818	-0.394	0.155	0.057	-0.432	0.187	0.034	-0.035	0.001	0.873	-0.437	0.191	0.032
Female:																		
Event	-0.185	0.034	0.392	0.437	0.191	0.032	-0.342	0.117	0.103	-0.097	0.009	0.655	0.003	<0.001	0.989	-0.222	0.049	0.301
Pressure	0.220	0.048	0.304	0.342	0.117	0.102	-0.178	0.032	0.409	0.178	0.032	0.411	-0.504	0.254	0.011	-0.164	0.027	0.447
Cldn	-0.056	0.003	0.798	-0.310	0.096	0.142	-0.437	0.191	0.032	-0.023	0.001	0.916	-0.168	0.028	0.437	-0.264	0.070	0.215
Both:																		
Event	-0.039	0.002	0.859	0.681	0.464	<0.001	-0.292	0.085	0.168	-0.147	0.022	0.498	0.083	0.007	0.702	-0.051	0.003	0.814
Pressure	0.146	0.021	0.501	0.252	0.064	0.237	-0.160	0.026	0.459	-0.101	0.010	0.643	-0.557	0.310	0.004	-0.326	0.106	0.121
Cldn	-0.322	0.104	0.126	-0.189	0.036	0.380	-0.439	0.193	0.031	-0.402	0.162	0.051	-0.069	0.005	0.751	-0.364	0.132	0.081
FIGHTER (N=56):																		
Male:																		
Event	0.217	0.047	0.102	0.450	0.203	<0.001	-0.185	0.034	0.165	0.196	0.038	0.141	0.170	0.029	0.204	0.214	0.046	0.106
Pressure	0.181	0.033	0.175	0.093	0.009	0.488	-0.153	0.023	0.252	0.251	0.063	0.058	0.075	0.006	0.578	0.147	0.022	0.272
Carpet	0.114	0.013	0.394	0.184	0.034	0.167	-0.069	0.005	0.609	0.229	0.052	0.084	0.045	0.002	0.741	0.112	0.013	0.404
Cldn	0.207	0.043	0.120	0.228	0.052	0.085	-0.149	0.022	0.265	0.265	0.070	0.044	0.133	0.018	0.320	0.203	0.041	0.127

Table 30 (page 2)

Female:																		
Event	-0.132	0.017	0.326	0.206	0.042	0.122	-0.158	0.025	0.237	-0.017	<0.001	0.898	-0.006	<0.001	0.965	-0.144	0.021	0.281
Pressure	0.023	0.001	0.866	0.156	0.024	0.245	-0.177	0.031	0.185	0.420	0.176	<0.001	-0.078	0.006	0.562	0.037	0.001	0.785
Carpet	0.068	0.005	0.616	0.238	0.057	0.072	-0.168	0.028	0.208	0.347	0.120	0.007	-0.061	0.004	0.652	0.057	0.003	0.670
Cldn	-0.002	<0.001	0.988	0.203	0.041	0.126	-0.143	0.020	0.287	0.286	0.082	0.029	-0.049	0.002	0.715	0.011	<0.001	0.935
Both:																		
Event	0.057	0.003	0.673	0.374	0.140	0.004	-0.192	0.037	0.148	0.048	0.002	0.719	0.123	0.015	0.358	0.075	0.006	0.576
Pressure	0.118	0.014	0.378	0.141	0.020	0.292	-0.164	0.027	0.221	0.450	0.203	<0.001	0.042	0.002	0.755	0.119	0.014	0.377
Carpet	0.105	0.011	0.434	0.240	0.058	0.070	-0.113	0.013	0.402	0.406	0.165	0.001	0.024	0.001	0.861	0.108	0.012	0.420
Cldn	0.119	0.014	0.376	0.246	0.061	0.063	-0.145	0.021	0.280	0.343	0.118	0.008	0.091	0.008	0.501	0.142	0.020	0.290
SR71 (N=27):																		
Male:																		
Event	-0.101	0.010	0.604	0.328	0.108	0.083	-0.292	0.085	0.125	-0.093	0.009	0.635	0.068	0.005	0.729	-0.091	0.008	0.643
Pressure	-0.077	0.006	0.694	-0.202	0.041	0.296	0.030	0.001	0.879	-0.156	0.024	0.423	-0.530	0.281	0.003	-0.412	0.170	0.025
Carpet	0.044	0.002	0.822	0.215	0.046	0.265	-0.022	<0.001	0.911	0.197	0.039	0.308	0.513	0.263	0.004	0.393	0.154	0.034
Cldn	-0.433	0.187	0.018	0.106	0.011	0.586	-0.407	0.166	0.028	-0.364	0.132	0.052	-0.052	0.003	0.792	-0.421	0.177	0.022
Female:																		
Event	-0.086	0.007	0.662	-0.053	0.003	0.787	-0.291	0.085	0.126	0.369	0.136	0.048	-0.021	<0.001	0.914	-0.081	0.007	0.681
Pressure	0.260	0.068	0.174	0.135	0.018	0.490	0.003	<0.001	0.988	0.018	<0.001	0.926	-0.434	0.188	0.018	-0.083	0.007	0.673
Carpet	-0.315	0.099	0.097	-0.118	0.014	0.544	0.004	<0.001	0.983	-0.058	0.003	0.768	0.407	0.166	0.028	0.030	0.001	0.878
Cldn	-0.007	<0.001	0.972	-0.391	0.153	0.035	-0.396	0.157	0.033	0.192	0.037	0.321	-0.178	0.032	0.358	-0.191	0.036	0.323
Both:																		
Event	-0.097	0.009	0.619	0.293	0.086	0.124	-0.320	0.102	0.091	0.210	0.044	0.278	0.068	0.005	0.729	-0.057	0.003	0.772
Pressure	0.089	0.008	0.648	-0.143	0.020	0.462	0.026	0.001	0.893	-0.130	0.017	0.505	-0.514	0.264	0.004	-0.307	0.094	0.105
Carpet	-0.143	0.020	0.463	0.160	0.026	0.411	-0.018	<0.001	0.926	0.129	0.017	0.509	0.492	0.242	0.006	0.268	0.072	0.161
Cldn	-0.253	0.064	0.187	-0.026	0.001	0.896	-0.438	0.192	0.017	-0.144	0.021	0.460	-0.079	0.006	0.687	-0.314	0.099	0.098

The age-adjusted death rates used for this analysis are presented in Table 3-3E.

Table 31

PERCENTAGES OF MORBIDITY AMONG HOSPITAL DISCHARGE DIAGNOSIS IN NEVADA
BY PERCENT OF DISCHARGE DIAGNOSIS

TOWNSHIP	Cardiovascular (Mean +/- S.D.)	Hypertension (Mean +/- S.D.)	Cancer (Mean +/- S.D.)	CVA (Mean +/- S.D.)	Others (Mean +/- S.D.)
All Townships:	39.60 +/- 9.27	5.61 +/- 4.26	16.70 +/- 15.59	7.60 +/- 3.09	30.50 +/- 9.68
High Risk Area:					
Caliente	43.20 +/- 8.60	7.20 +/- 4.40	13.60 +/- 5.40	7.50 +/- 2.80	28.50 +/- 4.40
Las Vegas	45.10 +/- 3.30	5.70 +/- 1.20	17.80 +/- 4.40	8.90 +/- 0.90	22.50 +/- 4.70
Tonopah	36.80 +/- 1.70	14.60 +/- 2.40	11.30 +/- 3.00	7.30 +/- 2.18	30.10 +/- 1.70
Union *	55.30	0.80	9.80	10.60	23.60
New River	43.30 +/- 5.00	4.70 +/- 1.70	7.70 +/- 3.00	9.10 +/- 2.10	35.10 +/- 5.40
Argenta	43.00 +/- 3.80	8.40 +/- 2.50	9.40 +/- 4.30	3.80 +/- 3.50	35.30 +/- 6.10
Sparks *	2.48	3.10	11.10	4.00	56.90
Reno	34.80 +/- 15.60	2.90 +/- 1.40	36.60 +/- 28.20	7.20 +/- 3.30	18.50 +/- 8.20
All Townships:	41.73 +/- 8.91	5.57 +/- 3.37	15.71 +/- 15.17	7.99 +/- 2.70	28.99 +/- 9.46
ANOVA (p-value):	0.0638	0.0000	0.0030	0.0256	0.0000
Medium/Low Risk Area:					
Ely	45.70 +/- 3.90	1.10 +/- 0.70	15.30 +/- 5.50	10.80 +/- 3.60	27.10 +/- 2.20
Elko	32.80 +/- 2.40	1.10 +/- 0.70	16.70 +/- 3.30	7.80 +/- 1.20	41.50 +/- 3.50
Nelson	35.10 +/- 17.70	10.10 +/- 5.30	21.90 +/- 38.40	4.50 +/- 2.70	28.40 +/- 14.50
Hawthorne	32.20 +/- 5.30	11.40 +/- 4.40	11.80 +/- 7.40	4.60 +/- 3.60	40.00 +/- 8.50
Henderson	36.70 +/- 3.50	3.80 +/- 1.70	21.20 +/- 2.90	9.00 +/- 2.60	29.30 +/- 5.80
Carson City	42.20 +/- 3.00	3.10 +/- 0.60	22.70 +/- 1.10	6.80 +/- 1.70	25.20 +/- 1.50
All Townships:	36.88 +/- 9.13	5.65 +/- 5.24	17.96 +/- 16.25	7.09 +/- 3.50	32.43 +/- 9.77
ANOVA (p-value):	0.0925	0.0000	0.8600	0.0043	0.0064
t-test between two areas (p-value):	0.0233	0.9337	0.5397	0.2093	0.1282

* Data are based on single observation.
Data at various lengths from 1969-1985 were collected from 20 hospitals.
The townships are listed in descending order of risk within each group.

Table 32 (page 1)
Association between Hospital Diagnoses and
Sonic Boom Exposure

	Cardiovascular Diseases			Hypertension			Cancer			Cerebrovascular Accident			Others		
	r	r^2	p-value	r	r^2	p-value	r	r^2	p value	r	r^2	p-value	r	r^2	p-value
ALL AREA (N=62):															
All Aircraft:															
Event	0.148	0.022	0.244	0.071	0.005	0.580	-0.058	0.003	0.653	-0.023	0.001	0.859	-0.070	0.005	0.582
Pressure	0.240	0.058	0.056	0.073	0.005	0.566	0.033	0.001	0.796	0.057	0.000	0.656	-0.350	0.122	0.004
Cldn	0.263	0.069	0.035	0.013	<0.001	0.916	-0.149	0.022	0.241	0.174	0.030	0.170	-0.064	0.004	0.617
Fighter:															
Event	0.144	0.021	0.258	0.075	0.006	0.559	-0.054	0.003	0.674	-0.029	0.001	0.823	-0.073	0.005	0.570
Pressure	0.213	0.045	0.092	0.069	0.005	0.589	-0.105	0.011	0.411	0.141	0.020	0.269	-0.104	0.011	0.415
Carpet	0.176	0.031	0.165	0.056	0.003	0.659	-0.103	0.011	0.419	0.120	0.014	0.347	-0.058	0.003	0.653
Cldn	0.214	0.046	0.090	0.156	0.024	0.219	-0.061	0.004	0.633	0.047	0.002	0.713	-0.189	0.036	0.135
SR71:															
Event	0.235	0.055	0.061	-0.221	0.049	0.079	-0.211	0.045	0.094	0.332	0.110	0.007	0.122	0.015	0.336
Pressure	-0.013	<0.001	0.917	-0.136	0.018	0.284	0.221	0.049	0.080	-0.091	0.008	0.476	-0.289	0.084	0.020
Carpet	0.014	<0.001	0.911	0.154	0.024	0.225	-0.263	0.069	0.036	0.077	0.006	0.549	0.360	0.130	0.003
Cldn	0.058	0.003	0.653	-0.082	<0.001	0.523	-0.157	0.025	0.217	0.122	0.015	0.339	0.214	0.046	0.089
HIGH RISK AREA (N=33):															
All Aircraft:															
Event	0.104	0.011	0.555	0.179	0.032	0.307	-0.159	0.025	0.737	-0.153	0.023	0.382	-0.006	<0.001	0.971
Pressure	0.189	0.036	0.279	0.216	0.047	0.215	0.078	0.006	0.658	-0.068	0.005	0.698	-0.395	0.156	0.018
Cldn	0.270	0.073	0.117	0.248	<0.001	0.152	-0.136	0.018	0.437	-0.066	0.004	0.707	-0.077	0.006	0.662

Fighter:															
Event	0.103	0.011	0.560	0.177	0.031	0.312	-0.055	0.003	0.755	-0.155	0.024	0.376	-0.012	<0.001	0.947
Pressure	0.322	0.104	0.059	0.326	0.106	0.056	-0.299	0.089	0.187	-0.002	<0.001	0.993	0.004	<0.000	0.981
Carpet	0.295	0.087	0.086	0.336	0.113	0.048	-0.264	0.070	0.126	-0.035	0.001	0.844	0.106	0.011	0.546
Cldn	0.241	0.058	0.165	0.356	<0.001	0.035	-0.112	0.013	0.525	-0.069	0.005	0.696	-0.126	0.016	0.472
SR71:															
Event	0.139	0.019	0.428	0.155	0.024	0.376	-0.380	0.144	0.024	0.170	0.029	0.332	0.488	0.238	0.003
Pressure	-0.139	0.019	0.430	-0.292	0.085	0.089	0.353	0.125	0.037	-0.084	0.007	0.636	-0.418	0.175	0.012
Carpet	0.206	0.042	0.241	0.353	0.125	0.037	-0.429	0.184	0.009	0.121	0.015	0.491	0.468	0.219	0.491
Cldn	0.008	<0.001	0.964	-0.066	<0.001	0.708	-0.143	0.020	0.414	-0.012	.000	0.946	0.291	0.085	0.090
MEDIUM/LOW RISK AREA (N=29):															
All Aircraft:															
Event	0.308	0.095	0.092	-0.381	0.145	0.034	-0.083	0.007	0.660	0.423	0.179	0.017	-0.109	0.012	0.562
Pressure	0.093	0.009	0.620	-0.032	0.001	0.864	0.044	0.002	0.817	0.036	0.001	0.849	-0.160	0.026	0.392
Cldn	-0.013	<0.001	0.947	-0.117	0.014	0.533	-0.157	0.025	0.401	0.225	0.051	0.225	0.261	0.068	0.157
Fighter:															
Event	0.053	0.003	0.780	0.031	0.001	0.869	-0.025	0.001	0.895	0.114	0.013	0.544	-0.064	0.004	0.734
Pressure	0.043	0.002	0.818	-0.089	0.008	0.638	0.060	0.004	0.751	0.241	0.058	0.193	-0.183	0.033	0.328
Carpet	0.030	0.001	0.875	-0.103	0.011	0.585	0.082	0.007	0.666	0.228	0.052	0.220	-0.195	0.038	0.297
Cldn	-0.027	0.001	0.885	0.042	0.002	0.825	0.088	0.008	0.640	0.065	0.004	0.729	-0.168	0.028	0.369
SR71:															
Event	0.307	0.094	0.093	-0.380	0.144	0.034	-0.082	0.007	0.662	0.421	0.177	0.018	-0.108	0.012	0.566
Pressure	0.097	0.009	0.608	-0.028	0.001	0.881	0.037	0.001	0.846	-0.176	0.031	0.345	-0.079	0.006	0.675
Carpet	-0.135	0.018	0.471	0.015	<0.001	0.936	-0.052	0.003	0.784	0.132	0.017	0.481	0.164	0.027	0.381
Cldn	-0.008	<0.001	0.965	-0.089	0.008	0.638	-0.155	0.024	0.409	0.153	0.023	0.416	0.264	0.070	0.153

Cldn: Day-Night C-weighted sound average
r: Correlation Coefficient
r^2: Goodness-Of-Fit

APPENDIX I

APPENDIX 1

TABLE 1

INVENTORY OF TAPE ID AND DENOTED CONTENT

Tape Id	Denoted Content: File	Record Length	Number of Records
DB 1377/SPD	Ambulance Reports	250	28,872
DB 1372/SPD	Abortion(1978-1985)	90	44,807
DB 1350/SPD	Deaths(1964-1984)	150	107,945
DB 1073/SPD	Divorces(1968-1985)	100	186,144
DB 1351/SPD	Births(1964-1984)	250	reels 1 &2:
DB 1352/SPD	Births(1964-1984)	250	232,090
DB 1373/SPD	CH00 Population	300	10,545
DB 1378/SPD	WIC Clients (current)	400	12,663

APPENDIX 1

TABLE 2

INVENTORY OF TAPE ID AND DENOTED CONTENT FOR 1980 CENSUS OF NEVADA

VOL=SER	DATA SET NAME	LRECL	BLKSIZE	TAPE No.
UCI01A	STF1A	1638	29484	
UCI02B	STF2B	1956	31296	
UCIEE0	EE080	8838	26514	
UCIPUM	PUM5A, PUM5B, PUM5C	193	28950	
UCI3AB	STF3A, STF3B	2016	24192	
UCI4B1	STF4B	1956	31296	TAPE 1
UCI4B2	STF4B	1956	31296	TAPE 2
UCI4B3	STF4B	1956	31296	TAPE 3
UCI4B4*	STF4B	1956	31296	TAPE 4
UCI5AH	STF5AHOV	2046	30690	
UCI5A1	STF5APOP	2046	30690	TAPE 1
UCI5A2*	STF5APOP	2046	30690	TAPE 2
UCI5A3	STF5APOP	2046	30690	TAPE 3

Note: All tapes are non-labelled, written with ASC II, and all the densities are 1600 BPI.

* Bad tapes, need replacement.

APPENDIX 1

TABLE 3

DATA KEY OF CENSUS FILES OF POPULATION DISTRIBUTION
VOL=SER=DB1373

1964-1983: DSN=CDC.PM.CHOOP0P2,LABEL=(1,NL),LRECL=300
1964-1980: DSN=CDC.PM.CHOOP0PZ,LABEL=(2,NL),LRECL=300

COLUMN	FORMAT	VARIABLE	CODE
1-2	F2.0	Year	
3-4	F2.0	County	01=Carson City 02=Churchill 03=Clark* 04=Douglas 05=Elko 06=Esmeralda 07=Eurela 08=Humboldt 09=Lander 10=Lincoln 11=Lyon 12=Mineral 13=Nye 14=Pershing 15=Storey 16=Washoe* 17=White Pine 18=all rural counties+ 00=state total
5-6	F2.0	Sex/Race	01=total all 02=total white 03=total black 04=total indian 05=total other, unknown 11=male all 12=male white 13=male black 14=male indian 15=male other, unknown

Note: The first file is based on the 1980 census. The second file is based on the 1970 census. For 1964-1975, the estimates in the 2nd file are better; for 1976-1983, the estimates in the 1st file are better.

* Urban Counties

\+ County code 18 is total population of state minues the population of urban counties

COLUMN	FORMAT	VARIABLE	CODE
			21=female all 22=female white 23=female black 24=female indian 25=female other, unknown
7-294	36F8.0	Age Group|Population:	
	F2.0	Age Group:	01=all ages 02=< 1 yr 03=1 yr 04=2 yrs 05=3 yrs 06=4 yrs 07=5 yrs 08=6 yrs 09=7 yrs 10=8 yrs 11=9 yrs 12=10 yrs 13=11 yrs 14=12 yrs 15=13 yrs 16=14 yrs 17=15 yrs 18=16 yrs 19=17 yrs 20=18 yrs 21=19 yrs 22=20 yrs 23=21-24 yrs 24=25-29 yrs 25=30-34 yrs 26=35-39 yrs 27=40-44 yrs 28=45-49 yrs 29=50-54 yrs 30=55-59 yrs 31=60-64 yrs 32=65-69 yrs 33=70-74 yrs 34=75-79 yrs 35=80-84 yrs 36=> 84 yrs
	F6.0	Number of Population in the group	
295-300:	not used		

APPENDIX 1

TABLE 4

LAYOUT OF COMPUTER FILE ON BIRTHS OBTAINED FROM STATE OF NEVADA

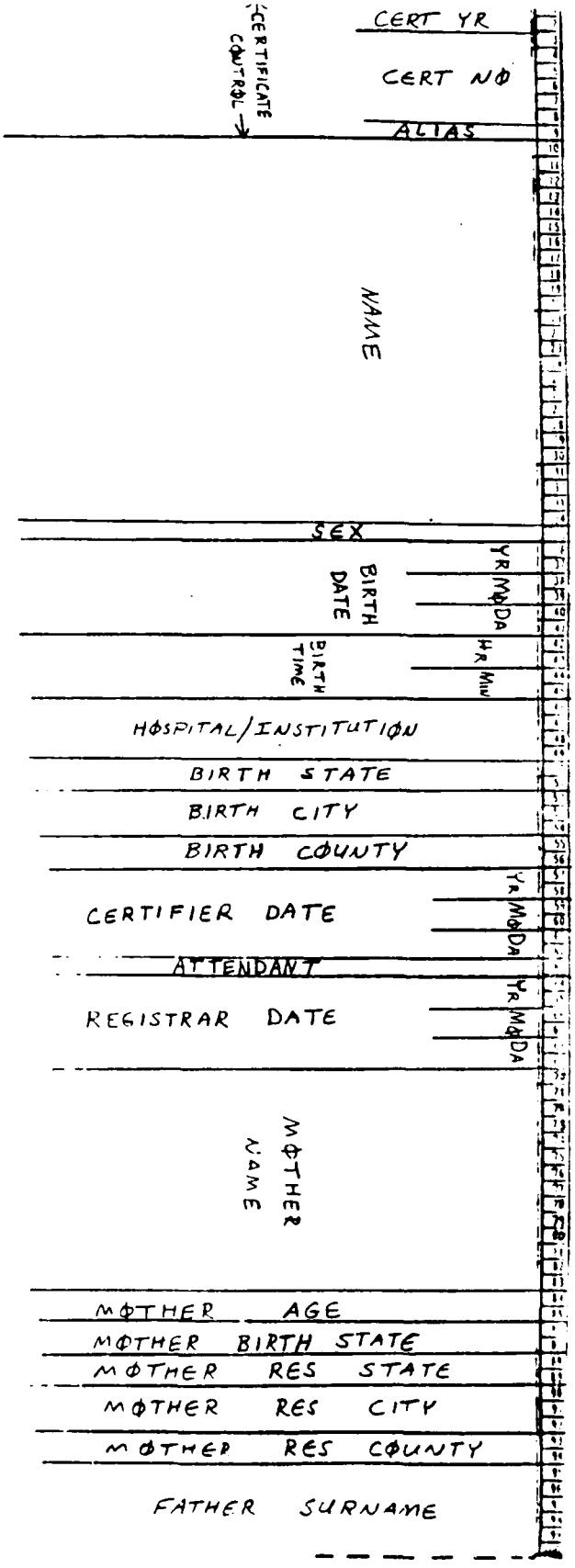

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TABLE 4

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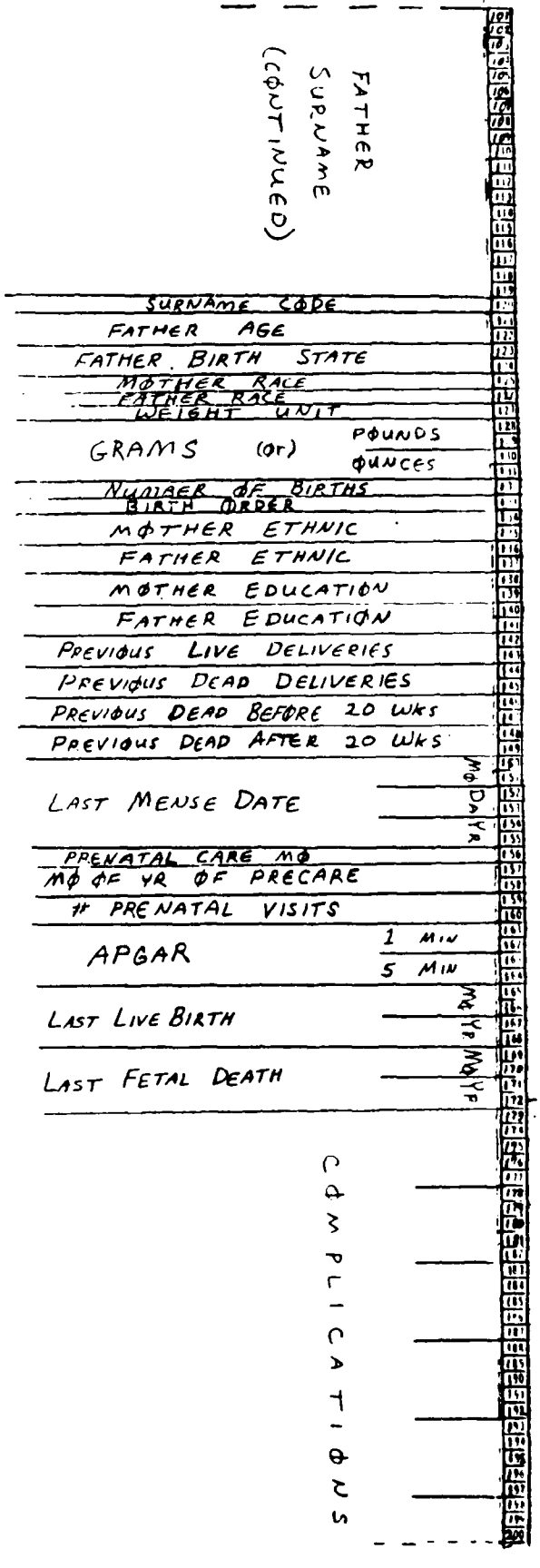

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TABLE 4

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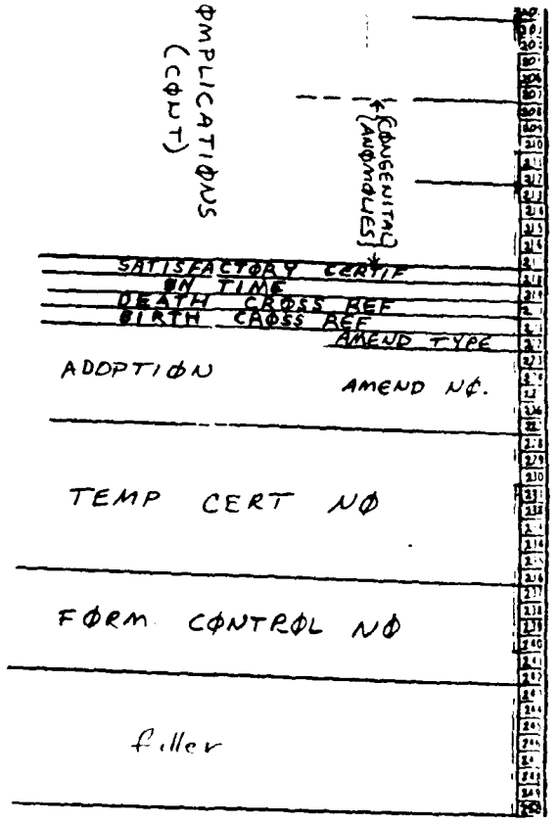
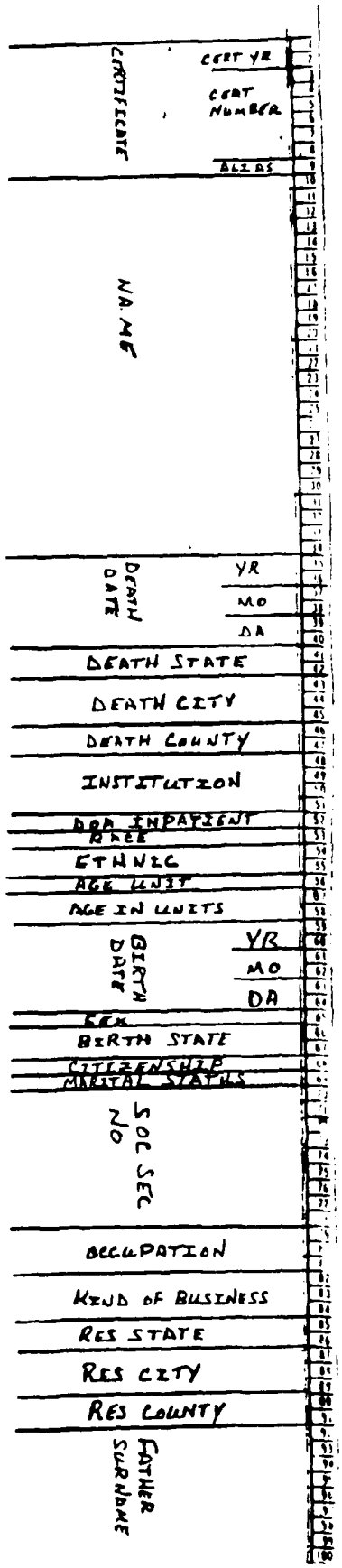


APPENDIX 1

TABLE 5

LAYOUT OF COMPUTER FILE ON DEATHS

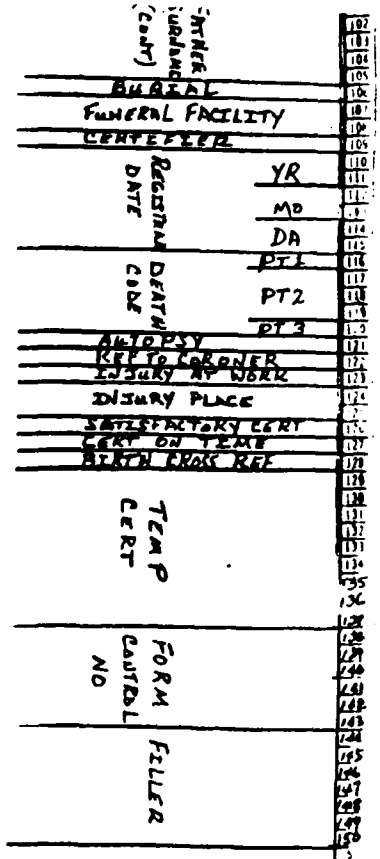
OBTAINED FROM STATE OF NEVADA



APPENDIX 1

TABLE 5

Page 2



```
000010*************************************************************************07/09/82
000020*          BIRTH MASTER AS OF 1978 - 250 BYTES                          VS05BMST
000030*************************************************************************  LV010
000040 01  MS-BIRTH-MASTER.                                        |Column    |
000050     05  MS-CERT-KEY.                                        |Position  |
000060         10  MS-CERT-NO.                                     |          |
000070             15  MS-CERT-YEAR          PIC 99.               |1-2       |
000080             15  MS-CERT-NUMBER        PIC 9(6).             |3-8       |
000090         10  MS-CERT-ALIAS             PIC X.                |9         |
000100     05  MS-NAME                       PIC X(25).            10-34
000110     05  MS-SEX                        PIC X.                35
000120     05  MS-BIRTH-DATE.
000130         10  MS-BIRTH-YR               PIC 99.               36-37
000140         10  MS-BIRTH-MO               PIC 99.               38-39
000150         10  MS-BIRTH-DA               PIC 99.               40-41
000160     05  MS-BIRTH-TIME.
000170         10  MS-BIRTH-HR               PIC XX.               42-43
000180         10  MS-BIRTH-MIN              PIC XX.               44-45
000190     05  MS-HOSPITAL                   PIC X(4).             46-49
000200     05  MS-BIRTH-STATE                PIC 99.               50-51
000210     05  MS-BIRTH-CITY                 PIC 999.              52-54
000220     05  MS-BIRTH-COUNTY               PIC XX.               55-56
000230     05  MS-CERTIFIER-DATE.
000240         10  MS-CERTIFIER-YR           PIC XX.               57-58
000250         10  MS-CERTIFIER-MO           PIC XX.               59-60
000260         10  MS-CERTIFIER-DA           PIC XX.               61-62
000270     05  MS-ATTENDANT                  PIC X.                63
000280     05  MS-REGISTRAR-DATE.
000290         10  MS-REGISTRAR-YR           PIC XX.               64-65
000300         10  MS-REGISTRAR-MO           PIC XX.               66-67
000310         10  MS-REGISTRAR-DA           PIC XX.               68-69
000320     05  MS-MOTHER-NAME                PIC X(14).            70-83
000330     05  MS-MOTHER-AGE                 PIC XX.               84-85
000340     05  MS-MOTHER-BIRTH-STATE         PIC XX.               86-87
000350     05  MS-MOTHER-RES-STATE           PIC XX.               88-89
000360     05  MS-MOTHER-RES-CITY            PIC XXX.              90-92
000370     05  MS-MOTHER-RES-COUNTY          PIC XX.               93-94
000380     05  MS-FATHER-SURNAME             PIC X(25).            95-119
000390     05  MS-SURNAME-CODE               PIC X.                120
000400     05  MS-FATHER-AGE                 PIC XX.               121-122
000410     05  MS-FATHER-BIRTH-STATE         PIC XX.               123-124
000420     05  MS-MOTHER-RACE                PIC X.                125
000430     05  MS-FATHER-RACE                PIC X.                126
000440     05  MS-BIRTH-WT-UNIT              PIC X.                127
000450     05  MS-BIRTH-WT-GRAMS.
000460         10  MS-BIRTH-WT-LBS           PIC XX.               128-129
000470         10  MS-BIRTH-WT-OZS           PIC XX.               130-131
000480     05  MS-NUMBER-BIRTHS              PIC X.                132
000490     05  MS-BIRTH-ORDER                PIC X.                133
000500     05  MS-MOTHER-ETHNIC              PIC XX.               134-135
000510     05  MS-FATHER-ETHNIC              PIC XX.               136-137
000520     05  MS-MOTHER-EDUC                PIC XX.               138-139
000530     05  MS-FATHER-EDUC                PIC XX.               140-141
000540     05  MS-PREV-DELIV-LIVING          PIC XX.               142-143
000550     05  MS-PREV-DELIV-DEAD            PIC XX.               144-145
000560     05  MS-DEAD-BEFORE-20-WKS         PIC XX.               146-147
000570     05  MS-DEAD-AFTER-20-WKS          PIC XX.               148-149
000580     05  MS-LAST-MENSES-DATE.
000590         10  MS-LAST-MENSES-MO         PIC XX.               150-151
```

APPENDIX 1

TABLE 6

VARIABLES AND THEIR LOCATION ON BIRTH

FILE OBTAINED FROM STATE OF NEVADA

```
000600           10  MS-LAST-MENSES-DA      PIC XX.      152-153
000610           10  MS-LAST-MENSES-YR      PIC XX.      154-155
000620      05   MS-PRENATAL-CARE-MO-NUM    PIC X.       156
000630      05   MS-PRENATAL-CARE-MO-NAM    PIC XX.      157-158
000640      05   MS-PRENATAL-VISITS         PIC XX.      159-160
000650      05   MS-APGAR-1-MIN             PIC XX.      161-162
000660      05   MS-APGAR-5-MIN             PIC XX.      163-164
000670      05   MS-LAST-LIVE-BIRTH-DATE.
000680           10  MS-LAST-LIVE-BIRTH-MO PIC XX.       165-166
000690           10  MS-LAST-LIVE-BIRTH-YR PIC XX.       167-168
000700      05   MS-LAST-FETAL-DEATH-DATE.
000710           10  MS-LAST-FETAL-DEATH-MO PIC XX.      169-170
000720           10  MS-LAST-FETAL-DEATH-YR PIC XX.      171-172
000730      05   MS-COMPLICATIONS.
000740           10  MS-COMPLICATION        PIC X(5)          OCCURS 9 TIMES.173-217
000750      05   FILLER      REDEFINES  MS-COMPLICATIONS.
000760           10  MS-COMPLICATE          PIC X(5)          OCCURS 7 TIMES.173-207
000770           10  MS-CONGEN-ANOM         PIC X(5)          OCCURS 2 TIMES.208-217
000780      05   MS-SATISFACTORY-CERT       PIC X.       218
000790      05   MS-CERT-ON-TIME            PIC X.       219
000800      05   MS-DEATH-CROSS-REF         PIC X.       220
000810      05   MS-BIRTH-CROSS-REF         PIC X.       221
000820      05   MS-AMEND-TYPE              PIC X.       222
000830      05   MS-AMEND-NUMBER            PIC X(5).    223-227
000840      05   MS-TEMP-CERT-NO            PIC X(9).    228-236
000850      05   MS-FORM-CONTROL-NO         PIC 9(6).    237-242
000860      05   FILLER                     PIC X(8).    243-250
```


(67/69/F2)

```
000010*************************************************************************08/20/80
000020*          DEATH MASTER AS OF 1978 - 150 BYTES                          VS05DMST
000030*************************************************************************   LV006
000040 01   MS-DEATH-MASTER.
000050       05   MS-CERT-KEY.
000060            10   MS-CERT-NO.
000070                 15   MS-CERT-YEAR          PIC XX.      1-2
000080                 15   MS-CERT-NUMBER        PIC X(6).    3-8
000090            10   MS-CERT-ALIAS             PIC X.       9
000100       05   MS-NAME                        PIC X(25).   10-34
000110       05   MS-DEATH-DATE.
000120            10   MS-DEATH-YR               PIC XX.      35-36
000130            10   MS-DEATH-MO               PIC XX.      37-38
000140            10   MS-DEATH-DA               PIC XX.      39-40
000150       05   MS-DEATH-STATE                 PIC XX.      41-42
000160       05   MS-DEATH-CITY                  PIC XXX.     43-45
000170       05   MS-DEATH-COUNTY                PIC XX.      46-47
000180       05   MS-INSTITUTION                 PIC X(4).    48-51
000190       05   MS-DOA-INPATIENT               PIC X.       52
000200       05   MS-RACE                        PIC X.       53
000210       05   MS-ETHNIC                      PIC XX.      54
000220       05   MS-AGE-UNIT                    PIC X.       55
000230       05   MS-AGE-IN-UNITS                PIC XX.      56-57
000240       05   MS-BIRTH-DATE.
000250            10   MS-BIRTH-YR               PIC XX.      58-59
000260            10   MS-BIRTH-MO               PIC XX.      60-61
000270            10   MS-BIRTH-DA               PIC XX.      62-63
000280       05   MS-SEX                         PIC X.       64
000290       05   MS-BIRTH-STATE                 PIC XX.      65-66
000300       05   MS-CITIZENSHIP                 PIC X.       67
000310       05   MS-MARITAL-STATUS              PIC X.       68
000320       05   MS-SOC-SEC-NO                  PIC X(9).    69-77
000330       05   MS-OCCUPATION                  PIC XXX.     78-80
000340       05   MS-KIND-OF-BUSINESS            PIC XXX.     81-83
000350       05   MS-RES-STATE                   PIC XX.      84-85
000360       05   MS-RES-CITY                    PIC XXX.     86-88
000370       05   MS-RES-COUNTY                  PIC XX.      89-90
000380       05   MS-FATHER-SURNAME              PIC X(14).91-105
000390       05   MS-BURIAL                      PIC X.       106
000400       05   MS-FUNERAL-FACILITY            PIC XX.      107-108
000410       05   MS-CERTIFIER                   PIC X.       109
000420       05   MS-REGISTRAR-DATE.
000430            10   MS-REGISTRAR-YR           PIC XX.      110-111
000440            10   MS-REGISTRAR-MO           PIC XX.      112-113
000450            10   MS-REGISTRAR-DA           PIC XX.      114-115
000460       05   MS-DEATH-CODE.
000470            10   MS-DEATH-CODE-PT1         PIC X.       116
000480            10   MS-DEATH-CODE-PT2         PIC XXX.     117-119
000490            10   MS-DEATH-CODE-PT3         PIC X.       120
000500       05   MS-AUTOPSY                     PIC X.       121
000510       05   MS-REF-TO-CORONER              PIC X.       122
000520       05   MS-INJURY-AT-WORK              PIC X.       123
000530       05   MS-INJURY-PLACE                PIC XX.      124-125
000540       05   MS-SATISFACTORY-CERT           PIC X.       126
000550       05   MS-CERT-ON-TIME                PIC X.       127
000560       05   MS-BIRTH-CROSS-REF             PIC X.       128
000570       05   MS-TEMP-CERT                   PIC X(9).    129-137
000580       05   MS-FORM-CONTROL-NO             PIC 9(6).    138-143
000590       05   FILLER                         PIC X(7).    144-150
```

APPENDIX 1

TABLE 7

VARIABLES AND THEIR LOCATION ON DEATH FILE OBTAINED FROM STATE OF NEVADA

APPENDIX 1

TABLE 8

DATA KEY OF BIRTH FILE
(LRECL=250)

COLUMN	VARIABLE	CODE
1-34	N/A	
35	Sex	1=male 2=female 9=unknown
36-41	Birthday.	MMDDYY
42-45	Birth Time	HHMM 9999=unknown
46-49	Hospital	Appendix A
	Birth Place:	
50-51	state	Appendix A
52-54	city/town	Appendix C
55-56	county.	Appendix C
57-62	Certificate Date	MMDDYY
63	Attendant	1=Physician,res.,int. 2 =midwife,CNM 3=Physician, or midwife 4=Status unknown
64-69	Registrar Date	MMDDYY
	Mother:	
70-83	name	
84-85	age.	00-99
86-87	birth state	Appendix A
88-89	residence state	Appendix A
90-92	residence city.	Appendix C
	Father:	
95-119	surname	
120	surname code	Blank=legitimate 1=illegitimate
121-122	age	00-99
123-124	birth state	Appendix A
	Race: .	
125	mother	Appendix E
126	father	Appendix E

COLUMN	VARIABLE	CODE
127	Birth Wt. Unit .	Units wt. given in 1=grams 2=pounds 9=not classifiable
128-131	?????????	????????????
132	Number of Births	1=single 2=twin,or siamese 3=triplet 4=quadruplet 5=quintuplet 6=sextuplet,or plural 9=unknown
133	Birth Order	1-9 (e.g. 1=first,2=second) 9=unknown
	Ethnic: ·	
134-135	mother	Appendix H
136-137	father	Appendix H
	Education:	
138-139	mother	Appendix G
140-141	father	Appendix G
	Previous Delivery:	
142-143	live .	00-77 00=none 77=blank
144-145	dead ·	00-77 00=none 77=blank
	Previously Dead:	
146-147	before 20 weeks	00-99 99=no designation
148-149	after 20 weeks	00-99 99=no designation
150-155	Date Last Menses	MMDDYY
	Prenatal Care Month:	
156	month started	0-9 month of pregnancy
157-158	name of month	e.g. Jan=01 Feb=02 etc.

COLUMN	VARIABLE	CODE
159-160	No. Prenatal Visits	00-99 00=blank 88=not on certificate 99=unknown
	Apgar Score:	
161-162	1 min.	00-10, 88, 99 99=entry >10 88=not on record 00=blank
163-164	5 min.	00-10, 88, 99 99=entry >10 88=not on record 00=blank
165-168	Date Last Birth	MMYY
169-172	Date Last Fetal Death	MMYY
173-207	Complications	N/A
208-217	Congenital Anomaly	N/A
218	Satisfactory Certificate	blank=satisfactory 1=unsatisfactory
219	Certificate on Time	0-4 No.of days 0=on time 1=1 day 2=2 day 3=3 day 4=4 days+
220	Death Cross Reference	blank=yes 1=no
221	Birth Cross Reference	1 or blank blank=yes 1=no
	Adoption:	
222	amendment type	A,L,P,T,B,N

COLUMN	VARIABLE	CODE
223-227	amendment number	N/A
228-236	Temporary Certificate No.	N/A
COLUMN	VARIABLE	CODE
237-242	Form Control No.	N/A
243-250	Filler	

SMW:SML
06/27/85

APPENDIX 1, TABLE 9

DATA KEY OF NEVADA STATE DEATH FILE (LRECL=150)

COLUMN	VARIABLE	CODE
1-34	N/A	
35-40	Death Date	YYMMDD unknown=999999
	Place of Occurrence:	
41-42	State	Appendix D: 29=Nevada 99=Unknown
43-45	City/Town	Appendix F: Town Code: 001-195,701-716 =valid codes for in-state 717=unknown (for out of state) NCHS Code: rural area, or town code N/A
46-47	County	Appendix F: 01-17=valid codes for in-state 18=unknown (for out of state)
48-51	Institution	Appendix A: 0003=home 0004=other 0009=unspecified 2007=out-of-state
52	Hospital, Clinic and Medical Center	1=inpatient 2=out-patient 3=dead on arrival 4=status unknown 5=status not on certificate 6=other institution 7=all other reports 8=dead on arrival for institution unknown 9=unknown

COLUMN	VARIABLE	CODE
53	Race	Appendix B(Race) and Appendix H(Indian Tribe): 1=white 2=black 3=Indian 4=Chinese 5=Japanese 6=Hawaiian 7=other nonwhite 8=Filipino 9=unknown
54-55	Ethnic Group	Appendix I(ethnic gr.) & Appendix H(Indian Tribe): 01=Mexican 02=Puerto Rican 03=Cuban 04=Central/S. Amer. 05=other/unk. Span. 06=American 07=Indian 08=British,Scottish, Welch,Scotch-Irish 09=Irish 10=German 11=French 12=Norwegian, Swedish,Danish 13=Polish 14=Italian 15=other N., S., and central America 16=other W. European 17=other N. European 18=other E. European 19=other S. European 20=SE Asian & Pacific Islander 21=S. Central Asian ?2=other Asian 23=N. African 24=other African 88=not on certificate 99=not classifiable

COLUMN	VARIABLE	CODE
56	Age Unit	0=<100 years 1=100+ years 2=months 3=weeks 4=days 5=hours 6=minutes 9=unknown
57-58	Number of Age Units	99=unknown
59-64	Birthday	YYMMDD 99=unknown year*
65	Sex	1=male 2=female 9=unknown
66-67	State of Birth	Appendix D
68	Citizenry	1=USA 2=Canadian 3=Mexican 4=remainder 9=unspecified
69	Marital Status	1=married 2=single, not married, never married, Indian marriage 3=widowed 4=divorced 8=not on certificate 9=unknown
70-78	Social Security #	
79-81	Occupation	Code= N/A
82-84	Kind of Business	Code= N/A
	Place of Residence: (if unknown, use state=29 and data of occurrence for this field)	
85-86	State	Appendix D: 29=nevada, unknown

* Programmatically modified

COLUMN	VARIABLE	CODE
87-89	City/Town	Appendix F: 717=unknown (for state=29)
90-91	County	Appendix F: 18=unknown (for state=29,city=717)
92-105	Father's Surname	
106	Burial	1=burial 2=cremation 3=removal 4=anatomical dissect. 9=other, unknown
107-108	Funeral Facility	Appendix J: 00=out-of-state 98=others 99=unknown
109	Certifier	1=physician 2=coroner, medical examiner, sheriff, justice of peace 9=other, unknown
110-115	Date Registrar Received	MMDDYY
	Cause of Death (ICDA Code):	
116	E Code	blank=non-external E=external cause
117-120	Numeric Code	ICDA code without E Prefix (left justified)
121	Autopsy	1=yes (complete, partial) 2=no (refused, not available) 8=not on certificate 9=unknown
122	Referred to Coroner	1=yes 2=no 8=not on certificate 9=unknown

COLUMN	VARIABLE	CODE
123	Injuried at Work	1=yes 2=no 9=unknown
124-125	Place of Injury	01=desert 02=factory 03=farm 04=home 05=hotel 06=lake 07=mountain 08=office building 09=parking lot 10=school 11=street 00=others 99=unknown
126	Certificate satis.	blank=satisfactory 1=unsatisfactory
127	Certificate on time	blank=yes 1=late for 1 day 2=late for 2 days 3=late for 3 days 4=late for 4+ days
128	Birth Certificate on file in Nevada	blank=no 1=yes
129-137	Temporary certificate no.	N/A
138-143	Form Control no.	N/A
144-150	not used	

APPENDIX I

TABLE 10

CONTENTS OF REVISED POPULATION-DATA FILE

CONTENTS OF SAS DATA SET TO.POP

TRACKS USED=38 SUBEXTENTS=1 OBSERVATIONS=5400 CREATED BY OS JOB HSGO42PM ON CPUID 03-3081-022050

AT 18:37 TUESDAY, JULY 2, 1985 BY SAS RELEASE 82.2B DSNAME=HSGO42.POP.SAS.DATA BLKSIZE=23332 LRECL=324

OBSERVATIONS PER TRACK=144 GENERATED BY DATA

ALPHABETIC LIST OF VARIABLES

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
4	ALL	NUM	8	28			
2	COUNTY	NUM	8	12			
5	LT1	NUM	8	36			
22	RACE	NUM	8	172			
3	SEX	NUM	8	20			
1	YEAR	NUM	8	4			
6	YR1	NUM	8	44			
7	YR2	NUM	8	52			
8	YR3	NUM	8	60			
9	YR4	NUM	8	68			
10	YR5	NUM	8	76			
11	YR6	NUM	8	84			
12	YR7	NUM	8	92			
13	YR8	NUM	8	100			
14	YR9	NUM	8	108			
15	YR10	NUM	8	116			
16	YR11	NUM	8	124			
17	YR12	NUM	8	132			
18	YR13	NUM	8	140			
19	YR14	NUM	8	148			
20	YR15	NUM	8	156			
21	YR16	NUM	8	164			
23	YR17	NUM	8	180			
24	YR18	NUM	8	188			
25	YR19	NUM	8	196			
26	YR20	NUM	8	204			
40	YR85	NUM	8	316			
27	YR2124	NUM	8	212			
28	YR2529	NUM	8	220			
29	YR3034	NUM	8	228			
30	YR3539	NUM	8	236			
31	YR4044	NUM	8	244			
32	YR4549	NUM	8	252			
33	YR5054	NUM	8	260			
34	YR5559	NUM	8	268			
35	YR6064	NUM	8	276			
36	YR6569	NUM	8	284			
37	YR7074	NUM	8	292			
38	YR7579	NUM	8	300			
39	YR8084	NUM	8	308			

APPENDIX I

TABLE 11

UNIVARIATE DEPICTION OF DEATH DATA FOR DATA EDITING

(sample showing deaths by county, then by race)

STATE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
51	11	107270	0.010	99.997
55	3	107273	0.003	100.000

COUNTY	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
.	815	.	.	.
0	2400	2400	2.240	2.240
1	4116	6516	3.842	6.082
2	2107	8623	1.967	8.049
3	53110	61733	49.575	57.624
4	690	62423	0.644	58.268
5	3291	65714	3.072	61.340
6	152	65866	0.142	61.482
7	146	66012	0.136	61.619
8	1388	67400	1.296	62.914
9	387	67787	0.361	63.275
10	570	68357	0.532	63.808
11	1220	69577	1.139	64.946
12	1072	70649	1.001	65.947
13	1210	71859	1.129	67.076
14	756	72615	0.706	67.782
15	95	72710	0.089	67.871
16	31862	104572	29.741	97.612
17	1861	106433	1.737	99.349
88	686	107119	0.640	99.990
99	11	107130	0.010	100.000

RACE	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
.	815	.	.	.
0	179	179	0.167	0.167
1	99340	99519	92.728	92.896
2	5030	104549	4.695	97.591
3	1882	106431	1.757	99.348
4	143	106574	0.133	99.481
5	64	106638	0.060	99.541
6	14	106652	0.013	99.554
7	22	106674	0.021	99.574
8	83	106757	0.077	99.652
9	373	107130	0.348	100.000

APPENDIX 1

TABLE 12

BIVARIATE DEPICTION OF DEATH DATA FOR DATA EDITING

(sample showing deaths per county by state of birth)

++
++ DATA IN SAS DEATH FILE ++
++ (EXCLUDING 815 UNKNOWN CASES) ++
++

18:19 SUNDAY, JULY 21, 1985 11

TABLE OF O_STATE BY O_COUNTY

O_STATE O_COUNTY

FREQUENCY / PERCENT / ROW PCT / COL PCT	10	11	12	13	14	15	16	17	88	99	TOTAL
25	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 40.00 0.29	0 0.00 0.00 0.00	5 0.00
26	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00 25.00 0.58	0 0.00 0.00 0.00	16 0.01
27	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 12.50 0.29	0 0.00 0.00 0.00	16 0.01
28	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01 42.86 0.87	0 0.00 0.00 0.00	14 0.01
29	570 0.53 0.55 100.00	1220 1.14 1.17 100.00	1072 1.00 1.03 100.00	1210 1.13 1.16 100.00	756 0.71 0.73 100.00	95 0.09 0.09 100.00	31862 29.74 30.62 100.00	1861 1.74 1.79 100.00	0 0.00 0.00 0.00	11 0.01 0.01 100.00	104044 97.12
30	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
31	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 12.50 0.15	0 0.00 0.00 0.00	8 0.01
32	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	13 0.01 44.83 1.90	0 0.00 0.00 0.00	29 0.03
TOTAL	570 0.53	1220 1.14	1072 1.00	1210 1.13	756 0.71	95 0.09	31862 29.74	1861 1.74	686 0.64	11 0.01	107130 100.00

(CONTINUED)

APPENDIX 1, TABLE 13, CONTENTS OF EDITED DEATH DATA FILE

++++++++++++++++ MASTER ++++++++++++++++ 20.21 SUNDAY, JULY 21, 1985
++ DATA CONTENTS OF SAS DEATH FILE ++
++

CONTENTS OF SAS DATA SET TO.DEAD

TRACKS USED=140 SUBEXTENTS=1 OBSERVATIONS=107130 CREATED BY OS JOB HSG042D1 ON CPUID 03-3081-022050

AT 20:21 SUNDAY, JULY 21, 1985 BY SAS RELEASE 82.28 DSNAME=HSG042.DEATH.MASTER.SAS.DATA BLKSIZE=23428 LRECL=61

OBSERVATIONS PER TRACK=768 GENERATED BY DATA

ALPHABETIC LIST OF VARIABLES

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
12	AGE	NUM	2	33			
11	BIRTHDAY	NUM	6	27			
14	BSTATE	NUM	2	37			
18	BUSINESS	CHAR	3	46			
15	CITIZEN	NUM	2	39			
3	DAY	NUM	2	8			
10	ETHNIC	NUM	2	25			
22	ICDA	CHAR	5	56			
17	JOB	CHAR	3	43			
16	MARRY	NUM	2	41			
2	MONTH	NUM	2	6			
6	O_COUNTY	NUM	2	15			
4	O_STATE	NUM	2	10			
5	O_TOWN	NUM	3	12			
7	PLACE	NUM	4	17			
21	R_COUNTY	NUM	2	54			
19	R_STATE	NUM	2	49			
20	R_TOWN	NUM	3	51			
9	RACE	NUM	2	23			
13	SEX	NUM	2	35			
8	STATUS	NUM	2	21			
1	YEAR	NUM	2	4			

SOURCE STATEMENTS

```
DATA TO.DEAD;
SET ONE;                                                    00092499
```

APPENDIX 2

APPENDIX 2

TABLE 1

ICD CODES IMPLEMENTED BY NATIONAL HEALTH STATISTICS CENTER

Period: 1958 - Present

	Diagnosis	ICD - 7 1958-1967	ICD - 8 1968-1978	ICD - 9 1979-present
01 Cancer:				
01	Nasal Auditory Sinuses	160	160	160
02	Larynx	161	161	161
03	Trachea, Bronchus, Lung	162.0,162.1	162	162
04	Pleura	162.2,163	163.0	163
05	Malignant Melanoma (Skin)	190	172	172
06	Breast(female, male)	170	174	174-175
07	Colon	153	153	153
08	Stomach	151	151	151
09	Esophagus	150	150	150
10	Brain Tumor		191	191
11	Other Cancer		140-149,152, 154-159, 163.1-171, 173,175-190, 192-209	140-149,152, 154-159,164-171,173, 176-190, 192-208
	Total All Cancers	140-204	140-209	140-208
02 Respiratory:				
12	Acute Respiratory Infections	470-475	460-466	460-466
13	Bronchitis, chronic and unspecified	501-502	490-491	490-491
14	Emphysema	518	492	492
15	Asthma	241	493	493
16	Other Chronic Airway Obstruction		518+	494,496
	Chronic airway obstruction		490-493	490-494,496
17	Pneumoconiosis	523-524	515+ 516.0+,516.2+	500-505
18	Diseases due to external agents			506-508

ICD CODES IMPLEMENTED BY NATIONAL HEALTH STATISTICS CENTER

Diagnosis	ICD - 7 1958-1967	ICD - 8 1968-1978	ICD - 9 1979-present
Major Cardiovascular Diseases:		390-448	390-448
03 Disease of Heart:		390-398, 402,404, 410-429	390-398, 402, 404-429
19 Hypertensive Heart Disease		402	402
20 Hypertensive Heart and Renal disease		404	404
All Ischemic Heart Disease:		410-413	410-414
21 Acute Myocardial infarction		410	410
22 Old infarction and other forms of chronic ischemic heart disease		412	412,414
23 Other ischemic heart disease		411,413	411,413
24 Rheumatic fever and other hear diseases		390-398, 414-429	390-398, 405-409, 415-429
04 Hypertension with or without renal disease:			
25 Hypertension with or without renal disease		400,401, 403	401,403
05 Cerebral Vascular Accident:		430-438	430-438
26 Subarachnoid Hemorrhage		430+	430
27 CVA		431-436+	431-436
28 ill-defined and late effect		437-438+	437-438
06 Atherosclerosis:			
29 Atherosclerosis		440	440
07 Other disease of arteties, arterioles, and capillaries:			
30 Other diseases of arteries, arterioles, and capillaries		441-448	441-448

ICD CODES IMPLEMENTED BY NATIONAL HEALTH STATISTICS CENTER

Diagnosis	ICD - 7 1958-1967	ICD - 8 1968-1978	ICD - 9 1979-present
08 Other Cardiovascular Disease:			
31 Other Cardiovascular Disease		399,405-409,439	399,400, 439
09 Stress/Emotional:			
32 Specific Disorders of Sleep of Nonorganic Origin	780.7	306.4	307.4
33 Acute Reaction to Stress and Adjustment Disorders	320.7, 790.2	790.2,307	308,309
10 Reproduction:			
34 Spontaneous Abortion	650.0	643	634
35 Short Gestation Low Birthweight	774-776	777	765
11 Congenital Anomalies:			
36 Congenital anomalies	750-759	740-759	740-759
12 Other Diagnosis:			
37 All Other Diseases	residual	residual	residual

* ICD-7 codes need to be revised.
\+ Tentatively grouped.

APPENDIX 2

TABLE 2

GEOGRAPHIC CODES OF NEVADA FOR COUNTY, TOWNSHIP, AND, TOWN

Jurisdiction	Codes in Vital Records Town Code	NCHS Code
(01) Carson City County:		
01 Carson City Township		
Carson City	001	001
New Empire	120	001
Stewart	162	001
Rural Area and Unknown Town	001	001
(02) Churchill County:		
02 New River Township		
Dixie Valley	047	701
Fallon	059	701
Hazen	076	701
Stillwater	163	701
Rural Area and Unknown Town	701	701
(03) Clark County:		
03 Bunkerville Township		
Bunkerville	024	702
04 Goodsprings Township		
Goodsprings	073	702
Jean	086	702
Sandy	146	702
Sloan	156	702
05 Henderson Township		
Henderson	002	002
06 Las Vegas Township		
Blue Diamond	020	702
Charleston Park	032	702
East Las Vegas	052	702
Indian Springs	081	702
Las Vegas	003	003
Mountain Springs	118	702
North Las Vegas	004	004
West Las Vegas	194	702

Jurisdiction		Codes in Vital Records: Town Code	NCHS Code
07	Logan Township		
	Logandale	100	702
08	Mesquite Township		
	Mesquite	109	702
09	Moapa Township		
	Moapa	115	702
10	Nelson Township		
	Boulder Beach	022	702
	Boulder City	023	702
	Nelson	119	702
11	North Las Vegas Township		
	North Las Vegas	004	702
12	Overton Township		
	Overton	130	702
13	Searchlight Township		
	Laughlin	094	702
	Searchlight	148	702
	South Point	159	702
14	Rural Area and Unknown Town	702	702
(04)	Douglas County:		
15	East Fork Township		
	Centerville	030	703
	Dresserville	048	703
	Gardnerville	063	703
	Genoa	064	703
	Minden	113	703
	Stateline	160	703
16	Tahoe Township		
	Glenbrook	067	703
	Lakeridge	090	703
	Lincoln Park	097	703
	Logan Creek Estates	099	703

Jurisdiction			Codes in Vital Records: Town Code	Codes in Vital Records: NCHS Code
		Skyland	155	703
		Tahoe Village	167	703
		Zephyr Cove	193	703
	17	Rural Area and Unknown Town	703	703
(05)	Elko County:			
	18	Carlin Township		
		Carlin	026	704
		Midas	110	704
	19	East Line Township		
		Eastline	053	704
		Boone Springs	021	704
	20	Elko Township		
		Elko	055	704
		Halleck	074	704
		Jiggs	087	704
		Lamoille	091	704
		Lee	095	704
		Dinner Station	046	704
	21	Jackpot Township		
		Contact	035	704
		Jackpot	084	704
	22	Jarbridge Township		
		Jarbidge	085	704
	23	Mountain City Township		
		Deep Creek	043	704
		Jack Creek	083	704
		Mountain City	117	704
		North Fork	124	704
		Owyhee	131	704
		Patsville	136	704
		Wild Horse	189	704
		White Rock	188	704
	24	Tecoma Township		
		Montello	116	704
		Oasis	127	704

Jurisdiction		Codes in Vital Records: Town code	Codes in Vital Records: NCHS Code
25	Wells Township		
	Currie	040	704
	Deeth	044	704
	Ruby Valley	144	704
	Shantytown	150	704
	Welcome	185	704
	Wilkins	190	704
26	Rural Area and Unknown Town	704	704
(06)	Esmeralda County:		
27	Esmeralda Township		
	Coaldale	034	705
	Dyer	050	705
	Esmeralda	705	705
	Goldfield	072	705
	Gold Point	071	705
	Lida	096	705
	Silverpeak	154	705
	Rural Area and Unknown Town	705	705
(07)	Eureka County:		
28	Beowawe Township		
	Beowawe	018	706
	Palisade	133	706
	Primeaux	139	706
	Rixies	141	706
29	Eureka Township		
	Eureka	058	706
30	Rural Area and Unknown Town	706	706
(08)	Humboldt County:		
31	Gold Run Township		
	Getchell Mine	066	707
	Golonda	068	707
	Red House	140	707
	Valmy	175	707

Jurisdiction		Codes in Vital Records: Town Code	NCHS Code
32	McDermitt Township		
	Cordero	036	707
	McDermitt	107	707
	Orovada	129	707
33	Paradise Valley Township		
	Paradise Valley	135	707
34	Union Township		
	Daveytown	041	707
	Denio	045	707
	Jungo	088	707
	Sulphur	164	707
	Winnemucca	191	707
35	Rural Area and Unknown Town	707	707
(09)	Lander County:		
36	Argenta Township		
	Battle Mountain	017	708
	Cortez	037	708
	Gold Acres	069	708
	North Battle Mountain	123	708
	Tenabo	169	708
37	Austin Township		
	Austin	011	708
38	Rural Area and Unknwon Town	708	708
(10)	Lincoln County:		
39	Alamo Township		
	Alamo	008	709
	Ash Springs	010	709
	Hiko	078	709
	Tempiute	168	709
40	Caliente Township		
	Barclay	014	709
	Caliente	025	709
	Carp	027	709
	Elgin	054	709

Jurisdiction		Codes in Vital Records: Town Code	NCHS Code
41	Panaca Township		
	Panaca	134	709
	Rose Valley	142	709
42	Pioche Township		
	Caselton	029	709
	Pioche	138	709
	Ursine	174	709
43	Rural Area and Unknwon Town	709	709
(11)	Lyon County:		
44	Canal Township		
	Fernley	060	710
45	Dayton Township		
	Dayton	042	710
	Silver City	152	710
	Silver Springs	153	710
	Weeks(Toll Ranch)	184	710
46	Mason Valley Township		
	Wabuska	179	710
	Weed Heights	183	710
	Yerington	192	710
47	Smith Valley Township		
	Smith	157	710
	Wellington	186	710
48	Rural Area and Unknown Town	710	710
(12)	Mineral County:		
49	Hawthorne Township		
	Babbitt	012	711
	Hawthorne	075	711

Jurisdiction		Codes in Vital Records: Town Code	Codes in Vital Records: NCHS Code
50	Mina Township		
	Basalt	016	711
	Luning	103	711
	Mina	112	711
	Sodaville	158	711
51	Schurz Township		
	Schurz	147	711
52	Rural Area and Unknown Town	711	711
(13)	Nye County:		
53	Beatty Township		
	Beatty	195	712
	Lathrop Wells	093	712
54	Gabbs Township		
	Gabbs	062	712
	Ione	082	712
55	Pahrump Township		
	Pahrump	132	712
56	Round Mountain Township		
	Carvers	028	712
	Manhattan	104	712
	Round Mountain	143	712
57	Tonopah Township		
	Adaven	007	712
	Current	039	712
	Duckwater	049	712
	Lockes	098	712
	Tonopah	171	712
	Warm Springs	181	712
58	Rural Area and Unknown Town	712	712

Jurisdiction	Codes in Vital Records Town Code	NCHS Code
(14) Pershing County:		
59 Lake Township		
Barrell Springs	015	713
Imlay	079	713
Lovelock	101	713
Mill City	111	713
Oreana	128	713
Seven Troughs	149	713
Unionville	173	713
Rural Area and Unknown Town	713	713
(15) Storey County:		
60 Virginia Township		
Virginia City	177	714
Gold Hill	070	714
Rural Area and Unknwon Town	714	714
(16) Washoe County:		
61 Gerlach Township		
Empire	057	715
Gerlach	065	715
Vya	178	715
62 Reno Township		
Anderson	009	715
Black Springs	019	715
Crystal Bay	038	715
Flanigan	061	715
Hidden Valley	077	715
Incline Village	080	715
Mayberry-Highland Park	106	715
New Washoe City	121	715
North Valley	125	715
Northridge Subdivision	126	715
Reno	005	715
Steamboat	161	715
Washoe City	182	715
63 Sparks Township		
Sparks	006	006
Sun Valley	165	715
Sutcliffe	166	715

Jurisdiction		Codes in Vital Records: Town Code	NCHS Code
64	Verdi Township		
	Verdi	176	715
65	Wadsworth Township		
	Nixon	122	715
	Wadsworth	180	715
66	Rural Area and Unknown Town	715	715
(17)	White Pine County:		
67	Baker Township		
	Baker	013	716
68	Ely Township		
	Cherry Creek	033	716
	East Ely	051	716
	Ely	056	716
	Lages	089	716
	Lane City	092	716
	McGill	108	716
	Minerva	114	716
	Ruth	145	716
	Shoshone	151	716
	Tippett	170	716
69	Lund Township		
	Lund	102	716
	Preston	138	716
70	Rural Area and Unknown Town	716	716
(18)	Unknown County		
99	Township		
	Any Town	717	999

APPENDIX 2

TABLE 3

INTERMEDIATE DENOMINATOR DATA FILE

WITH 13 AGE CATEGORIES

```
++++++++++++++++++++++++++++++++++++++++++++++++       14:23 WEDNESDAY, JULY 3, 1985    1
++        DATA CONTENTS OF SAS CHOO FILE        ++
++          WITH NEW AGE CATEGORIES             ++
++++++++++++++++++++++++++++++++++++++++++++++++

                 CONTENTS OF SAS DATA SET TO.NEWAGE

TRACKS USED=17  SUBEXTENTS=2  OBSERVATIONS=5400  CREATED BY OS JOB HSG042PN  ON CPUID 03-3081-022050

AT 14:23 WEDNESDAY, JULY 3, 1985        BY SAS RELEASE 82.2B  DSNAME=HSG042.POP.SAS.DATA  BLKSIZE=23384  LRECL=140

OBSERVATIONS PER TRACK=334  GENERATED BY DATA

                 ALPHABETIC LIST OF VARIABLES
```

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
17	AGE_ALL	NUM	8	132			
5	AGE_LT1	NUM	8	36			
6	AGE_YR1	NUM	8	44			
9	AGE13_18	NUM	8	68			
10	AGE19_24	NUM	8	76			
7	AGE2_5	NUM	8	52			
11	AGE25_34	NUM	8	84			
12	AGE35_44	NUM	8	92			
13	AGE45_54	NUM	8	100			
14	AGE55_64	NUM	8	108			
8	AGE6_12	NUM	8	60			
15	AGE65_74	NUM	8	116			
16	AGE75_UP	NUM	8	124			
2	COUNTY	NUM	8	12			
4	RACE	NUM	8	28			
3	SEX	NUM	8	20			
1	YEAR	NUM	8	4			

```
+---------------------------- SOURCE STATEMENTS -----------------------------+
| DATA TO.NEWAGE;                        SET TO.POP;                 00090099|
|       AGE_LT1=LT1;                                                 00100099|
|       AGE_YR1=YR1;                                                 00101099|
|       AGE2_5=YR2+YR3+YR4+YR5;                                      00102099|
|       AGE6_12=YR6+YR7+YR8+YR9+YR10+YR11+YR12;                      00103099|
|       AGE13_18=YR13+YR14+YR15+YR16+YR17+YR18;                      00104099|
|       AGE19_24=YR19+YR20+YR2124;                                   00105099|
|       AGE25_34=YR2529+YR3034;                                      00106099|
|       AGE35_44=YR3539+YR4044;                                      00107099|
|       AGE45_54=YR4549+YR5054;                                      00108099|
|       AGE55_64=YR5559+YR6064;                                      00109099|
|       AGE65_74=YR6569+YR7074;                                      00109199|
|       AGE75_UP=YR7579+YR8084+YR85;                                 00109299|
|       AGE_ALL=ALL;                                                 00109399|
|       KEEP YEAR COUNTY SEX RACE AGE_LT1 AGE_YR1 AGE2_5 AGE6_12     00109499|
|            AGE13_18 AGE19_24 AGE25_34 AGE35_44 AGE45_54            00109599|
|            AGE55_64 AGE65_74 AGE75_UP AGE_ALL;                     00109699|
|                                                                    00110099|
```

APPENDIX 2

TABLE 4

FINAL DENOMINATOR DATA SET

WITH 8 AGE CATEGORIES

CONTENTS OF SAS DATA SET FROM.AGEGR

TRACKS USED=14 SUBEXTENTS=1 OBSERVATIONS=5400 CREATED BY OS JOB HSGO42PY ON CPUID 03-3081-022050

AT 23:45 SATURDAY, SEPTEMBER 21, 1985 BY SAS RELEASE 82.28 DSNAME=HSGO42.POP.SAS.DATA BLKSIZE=32380 LRECL=76

OBSERVATIONS PER TRACK=426 GENERATED BY DATA

ALPHABETIC LIST OF VARIABLES

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
2	COUNTY	NUM	2	6			
11	GE_65	NUM	8	60			
5	LE_5	NUM	8	12			
4	RACE	NUM	2	10			
3	SEX	NUM	2	8			
1	YEAR	NUM	2	4			
12	YR_ALL	NUM	8	68			
7	YR15_24	NUM	8	28			
8	YR25_44	NUM	8	36			
9	YR45_54	NUM	8	44			
6	YR5_14	NUM	8	20			
10	YR55_64	NUM	8	52			

SOURCE STATEMENTS

```
DATA FROM.AGEGR(BLKSIZE=32400);        SET FROM.POP;                                00090099
     LENGTH YEAR 2                                                                  00100099
            COUNTY 2                                                                00101099
            SEX 2                                                                   00101199
            RACE 2;                                                                 00101299
      LE_5=LT1+YR1+YR2+YR3+YR4;                                                     00102099
      YR5_14=YR5+YR6+YR7+YR8+YR9+YR10+YR11+YR12+YR13+YR14;                          00103099
      YR15_24=YR15+YR16+YR17+YR18+YR19+YR20+YR2124;                                 00104099
      YR25_44=YR2529+YR3034+YR3539+YR4044;                                          00106099
      YR45_54=YR4549+YR5054;                                                        00108099
      YR55_64=YR5559+YR6064;                                                        00109099
      GE_65=YR6569+YR7074+YR7579+YR8084+YR85;                                       00109199
      YR_ALL=ALL;                                                                   00109399
      KEEP YEAR COUNTY SEX RACE LE_5  YR5_14  YR15_24  YR25_44                      00109499
           YR45_54  YR55_64 GE_65 YR_ALL;                                           00109699
                                                                                    00110099
```

APPENDIX 3

APPENDIX 3

TABLE 1

HEADING OF VARIABLE POSITIONS IN EXPOSURE DATA (SAMPLE)

1769 TACTICAL AIRCRAFT ONLY 09-JAN-86

Altitude .1->30k ft , Mach Number >1.0

TOWNSHIP DATA			SUPERSONIC EVENT DATA			
Code Name	Area (sq mi)	Number of Events (/yr)	Average Pressure (psf)	Average Carpet Area (sq mi)	CLDN (dB)	Percent of Total Events
01 CARSON CITY	146	0.00	0.00	0.0	0.0	0.000
02 NEW RIVER	5036	0.00	0.00	0.0	0.0	0.000
03 BONNERVILLE	109	0.30	1.60	72.0	24.1	0.005
04 GOODSPRINGS	1095	0.60	1.60	72.0	17.0	0.010
05 HENDERSON	219	0.67	1.60	72.0	24.5	0.011
06 LAS VEGAS	1642	99.00	1.60	72.0	37.5	1.666
07 LOGAN	73	0.20	1.60	72.0	24.0	0.003
08 MESQUITE	219	0.60	1.60	72.0	24.0	0.010
09 MOAPA	1533	676.00	1.60	72.0	46.1	11.375
10 NELSON	730	2.00	1.60	72.0	24.0	0.034
11 N LAS VEGAS	511	2.18	1.60	72.0	26.0	0.037
12 OVERTON	1131	3.10	1.60	72.0	24.0	0.052
13 SEARCHLIGHT	803	2.14	1.60	72.0	23.9	0.036
15 EAST FORK	730	0.00	0.00	0.0	0.0	0.000
16 TAHOE	36	0.00	0.00	0.0	0.0	0.000
18 CARLIN	1606	1.86	1.60	72.0	20.3	0.031
19 EAST LINE	1533	0.00	0.00	0.0	0.0	0.000
20 ELKO	3467	6.32	1.60	72.0	22.3	0.106
21 JACKPOT	1168	1.53	1.60	72.0	20.8	0.026
22 JARBRIDGE	365	1.70	1.60	72.0	26.3	0.029
23 MOUNTAIN CITY	3066	7.68	1.60	72.0	23.6	0.129
24 TECOMA	2043	0.00	0.00	0.0	0.0	0.000
25 WELLS	4161	3.91	1.60	72.0	19.4	0.066
27 ESMERALDA	3503	0.00	0.00	0.0	0.0	0.000
28 BEDWAWE	1387	0.00	0.00	0.0	0.0	0.000
29 EUREKA	2773	0.00	0.00	0.0	0.0	0.000
31 COLD RUN	1424	0.17	1.60	72.0	10.4	0.003
32 McDERMITT	1533	0.42	1.60	72.0	14.0	0.007
33 PARADISE VALY	1387	0.38	1.60	72.0	14.0	0.006
34 UNION	5621	4.89	1.60	72.0	19.1	0.082
36 ARGENTA	2519	0.00	0.00	0.0	0.0	0.000
37 AUSTIN	3138	0.00	0.00	0.0	0.0	0.000
39 ALAMO	3941	1434.00	1.60	72.0	45.3	24.129
40 CALIENTE	3066	2902.00	1.66	72.2	49.7	48.831
41 PANACA	621	161.00	1.66	72.2	44.1	2.709
42 PIOCHE	2737	106.00	1.66	72.2	35.9	1.784
44 CANAL	182	0.00	0.00	0.0	0.0	0.000
45 DAYTON	438	0.00	0.00	0.0	0.0	0.000
46 MASON VALLEY	876	0.00	0.00	0.0	0.0	0.000
47 SMITH VALLEY	474	0.00	0.00	0.0	0.0	0.000
49 HAWTHORNE	1971	0.00	0.00	0.0	0.0	0.000
50 MINA	1387	0.00	0.00	0.0	0.0	0.000
51 SCHURZ	401	0.00	0.00	0.0	0.0	0.000
53 BEATTY	4526	227.00	2.20	76.9	39.7	3.820
54 GARRS	1569	0.00	0.00	0.0	0.0	0.000
55 FAHRUMP	292	1.16	1.69	73.4	26.2	0.020
56 ROUND MNTAIN	730	0.00	0.00	0.0	0.0	0.000
57 TONOPAH	10183	286.00	2.57	77.5	38.6	4.812
59 LAKE	5984	0.64	1.60	72.0	9.9	0.011
60 VIRGINIA	219	0.00	0.00	0.0	0.0	0.000
61 GERLACH	4343	9.18	1.45	65.4	21.7	0.154
62 RENO	766	0.10	1.60	72.0	10.8	0.002
63 SPARKS	621	0.12	1.60	72.0	12.5	0.002
64 VERDI	73	0.00	0.00	0.0	0.0	0.000
65 WADSWORTH	730	0.10	1.60	72.0	11.0	0.002
67 BAKER	1168	0.00	0.00	0.0	0.0	0.000
68 ELY	7190	0.00	0.00	0.0	0.0	0.000
69 LUND	694	0.00	0.00	0.0	0.0	0.000
TOTAL	109889	5942.95				100.000

APPENDIX 4

APPENDIX 4

TABLE 1

DATA KEY OF UCI-MASTER .DATA

COLUMN	FORMAT	VARIABLE
1	F 1.0	Aircraft
2-3	F 2.0	Year
4-5	F 2.0	Towncode
6-12	F 7.0	Town Area
13-21	F 9.2	No. of Events
22-27	F 6.2	Avg. Pressure
28-34	F 7.1	Avg. Carpet Area
35-40	F 6.1	C ldn
41-47	F 7.3	% of events
48-54	F 7.3	Death Rate
55-61	F 7.4	Pop. Porportion

DATA KEY FOR WEIGHTED UCI DATA AND DEATH RATES

File Name: UCI_Period_Fly_b_aar.data
UCI_Period_Fly_m_aar.data
UCI_Period_Fly_f_aar.data
UCI_Period_Fly_Rate.Data
UCI_Period_Pop_b_aar.data
UCI_Period_Pop_m_aar.data
UCI_Period_Pop_f_aar.data
UCI_Period_Pop_Rate.Data

Column	Format	Variable	Code
1	F1.0	Sex	1=male 2=female 3=both
2	F1.0	Aircraft	1=fighter 2=SR71 3=supersonic
3-4	F2.0	County	
5	F1.0	Period	1=1969 2=1970-1974 3=1975-1979 4=1980-1983
6-14	F9.2	No. of Event	
15-20	F6.2	Average Pressure	
21-27	F7.1	Avg. carpet area	
28-33	F6.1	Cldn	
34-40	F7.4	Cardiovascular*	
41-47	F7.4	Hypertension*	
48-54	F7.4	Cancer*	
55-61	F7.4	CVA*	
62-68	F7.4	Others*	
69-75	F7.4	Age Adjusted Death Rate	

* (all variables are age-adjusted, cause-specific death rates, per thousand, per year).

DATA KEY OF COMBINED UCI DATA AND FRACTION OF HOSPITAL DIAGNOSIS

File Name: UCI-2HOSP.DATA

COLUMN	FORMAT	VARIABLE
1	F1.0	Aircraft
2-3	F2.0	Year
4-5	F2.0	Township
6-14	F9.2	No. of Events
15-20	F6.2	Average Pressure
21-27	F7.1	Average Carpet Area
28-33	F6.1	Cldn
34-40	F7.4	Fraction of Cardiovascular Disease
41-47	F7.4	Fraction of Hypertension
48-54	F7.4	Fraction of Cancer
55-61	F7.4	Fraction of CVA
62-68	F7.4	Fraction of Other Illness

DATA KEY OF COMBINED UCI DATA AND FRACTION OF HOSPITAL DIAGNOSIS

File Name: UCI_HOSP.DATA

COLUMN	FORMAT	VARIABLE
1	F1.0	Aircraft
2-3	F2.0	Year
4-5	F2.0	Township
6-14	F9.2	No. of Events
15-20	F6.2	Average Pressure
21-27	F7.1	Average Carpet Area
28-33	F6.1	Cldn
34-40	F7.4	Fraction of Cardiovascular Disease
41-47	F7.4	Fraction of Hypertension
48-54	F7.4	Fraction of Cancer
55-61	F7.4	Fraction of CVA
62-68	F7.4	Fraction of Other Illness

This file is the combination of hospital data in fractions of five disease categories and exposure data.

APPENDIX 5

APPENDIX S

TABLE 1
REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN TOWNSHIP-LEVEL CRUDE MORTALITY RATES AND SONIC-BOOM PARAMETERS (TABLE 26)

AIRCRAFT TYPE			TOWNSHIP RISK				EXPOSURE LEVEL				REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
ALL	FIGHTER	SST	ALL	HIGH	LOW	NEDTUR	EVENT	CARPET	PRESSURE	SOUND						
/			/				/				Y= 7.91 + 454E-6*X	8.19	125.52	7.96	532.04	2.87
/			/						/		Y= 8.42 - .37*X	8.21	1.21	7.96	0.51	2.87
/			/							/	Y= 6.43 + .065*X	8.12	33.77	7.96	7.96	2.87
	/		/				/				Y= 7.92 +423E-6*X	8.20	115.24	7.96	531.22	2.87
	/		/					/			Y= 8.20 - .01*X	8.20	41.90	7.96	36.74	2.87
		/	/				/				Y= 7.67 + .03*X	7.99	10.29	7.96	17.98	2.87
		/	/						/		Y= 7.17 + .87*X	8.21	0.91	7.96	0.22	2.87
		/								/	Y= 5.58 + .08*X	7.91	30.93	7.96	7.49	2.87
/				/					/		Y= 9.09 - .51*X	6.93	1.17	8.34	0.64	2.65
	/			/			/				Y= 7.91 + 422E-6*X	7.14	754.67	8.23	1183.00	2.71
		/		/			/				Y= 7.79 + .025*X	5.68	88.82	8.51	26.47	2.46
		/		/					/		Y= 10.18 - 1.66*X	5.91	1.00	8.52	0.25	2.46
		/		/				/			Y= 6.76 + 566E -6*X	5.95	3109.10	6.58	646.52	2.46
/						/			/		Y= 8.89 - 1.21*X	8.99	1.01	7.63	0.33	3.02
	/					/	/				Y= 5.38 + .05*X	7.79	20.33	6.55	34.33	3.19
	/					/				/	Y= -23.16 + .88*X	8.16	33.48	6.35	1.74	3.19
/					/		/				Y= 7.30 + .37*X	8.56	1.36	7.80	1.24	2.95
/					/				/		Y= 9.35 - 1.49*X	8.55	1.04	7.80	0.30	2.95
/					/					/	Y= 6.18 + .14*X	8.27	25.11	7.80	4.80	2.95
	/				/			/			Y= 8.21 + .01*X	8.20	81.43	7.97	36.47	2.87
	/				/					/	Y= 8.32 + .04*X	8.09	8.11	7.97	9.67	2.87
		/			/		/				Y= 6.95 + .62*X	8.00	1.27	7.74	1.14	2.92
		/			/				/		Y= 6.15 + 1.83*X	8.34	0.89	7.74	0.23	2.92

APPENDIX 5

TABLE 2

REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN COUNTY-LEVEL, AGE-ADJUSTED, CAUSE- AND SEX- SPECIFIC MORTALITY RATES AND SONIC-BOOM PARAMETERS (TABLE 27)

AIRCRAFT TYPE			TOWNSHIP RISK				EXPOSURE LEVEL				SEX			CAUSE OF DEATH					REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
ALL	FIGHTER	SR71	ALL	HIGH	LOW	MEDIUM	EVENT	CARPET	PRESSURE	SOUND	MALE	FEMALE	BOTH	CANCER	RESP	CARDIO	CVA	OTHER						
	/		/					/				/					/		Y= .45 + .20*X	0.20	1.08	0.67	0.91	0.48
	/		/					/				/					/		Y= .45 + .01*X	0.21	39.49	0.67	29.80	0.48
	/		/						/				/				/		Y= .58 + .12*X	0.08	1.08	0.71	0.91	0.30
	/		/						/				/				/		Y= .57 + .01	0.08	39.49	0.71	29.80	0.30
/			/						/		/							/	Y= 6.37 - 1.05*X	3.01	1.15	5.17	0.43	1.78
/			/						/			/						/	Y= 3.32 + .58*X	0.78	1.18	2.65	0.43	0.91
/			/						/			/						/	Y= 3.83 + .03*X	0.77	35.00	3.86	8.03	0.91
/			/						/				/					/	Y= 4.81 + .80*X	1.47	1.13	3.88	0.43	1.25
/		/	/						/		/							/	Y= 7.94 + 2.988*X	2.87	0.93	5.17	0.20	1.78
/		/	/						/		/							/	Y= 1.43 + .01*X	2.84	3290.20	5.17	536.21	1.78
/		/	/						/			/						/	Y= 3.91 + 1.37*X	0.77	0.93	2.65	0.20	0.91
/		/	/						/			/						/	Y= 1.11 + 471E-6*X	0.78	329.20	2.65	536.21	0.91
/		/	/						/			/						/	Y= 3.83 + .04*X	0.80	88.08	2.65	6.28	0.91
/		/	/						/				/					/	Y= 5.87 + 2.13*X	1.41	0.93	3.89	0.20	1.25
/		/	/					/					/					/	Y= 1.29 + 790E-6*X	1.41	3290.20	3.81	536.21	1.25

AIRCRAFT TYPE	TOWNSHIP RISK	EXPOSURE LEVEL	SEX	CAUSE OF DEATH
ALL / FIGHTER / SR71	ALL / HIGH / LOW / MEDIUM	EVENT / CAPTIVE / PRESS / SOUND	MALE / FEMALE / BOTH	CANCER / NYPER / CARDIO / CVA / OTHER

APPENDIX 5

TABLE 3

REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN COUNTY-LEVEL, AGE-ADJUSTED, CAUSE- AND SEX- SPECIFIC MORTALITY RATES IN HIGH-RISK TOWNSHIPS AND SONIC-BOOM PARAMETERS (TABLE 28)

REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
Y= 5.59 + .02*X	1.14	65.94	4.32	32.70	3.22
Y= 2.06 + .03*X	0.01	75.81	0.05	2.58	0.12
Y= 1.12 - .01*X	0.01	75.81	0.03	2.58	0.06
Y= 1.85 + .01*X	0.21	65.93	9.80	32.69	0.59
Y= -3.60 + .03*X	0.21	39.51	0.81	2.78	0.59
Y= 1.19 + .01*X	0.14	63.94	1.54	32.70	0.60
Y= -1.92 + .09*X	0.11	39.51	1.53	2.78	0.60
Y= 11.43 + .35*X	0.21	45.67	4.69	5.35	1.32
Y= 8.85 - .14*X	0.22	45.67	2.54	5.35	0.86
Y= 10.62 - .15*X	0.60	45.67	3.61	5.35	1.10

AIRCRAFT TYPE	TOWNSHIP RISK	EXPOSURE LEVEL	SEX	CAUSE OF DEATH
ALL / FIGHTER / SR71	ALL / HIGH / LOW / MEDIUM	EVENT / CAPTIVE / PRESS / SOUND	MALE / FEMALE / BOTH	CANCER / NYPER / CARDIO / CVA / OTHER

APPENDIX 5

TABLE 4

REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN COUNTY-LEVEL, AGE-ADJUSTED, CAUSE- AND SEX- SPECIFIC MORTALITY RATES IN MEDIUM-RISK TOWNSHIPS AND SONIC-BOOM PARAMETERS (TABLE 29)

REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
Y= -3.51 + .07*X	0.14	33.20	2.08	1.21	0.41
Y= 691E-7 + .01*X	0.00	21.27	0.04	17.65	0.06
Y= -7.26 + .24*X	0.13	33.31	0.82	1.33	0.47
Y= -4.80 + .17*X	0.09	33.31	0.75	1.33	0.36
Y= -7.34 + .25*X	0.10	33.20	0.82	1.21	0.43
Y= -4.58 + .16*X	0.08	33.20	0.78	1.21	0.33

APPENDIX 5

TABLE 5

REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN COUNTY-LEVEL, AGE-ADJUSTED, CAUSE- AND SEX- SPECIFIC MORTALITY RATES IN LOW-RISK TOWNSHIPS AND SONIC-BOOM PARAMETERS (TABLE 30)

AIRCRAFT TYPE (ALL / FIGHTER / SR71)	TOWNSHIP RISK (ALL / HIGH / LOW / MEDIUM)	EXPOSURE LEVEL (EVENT / CARPET / PRESSURE / SOUND)	SEX (MALE / FEMALE / BOTH)	CAUSE OF DEATH (CANCER / HYPER / CARDIO / CVA / OTHER)	REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
ALL	LOW	SOUND	MALE	CARDIO	Y= 10.04 - .23*X	2.02	26.36	3.97	3.41	1.60
SR71	LOW	SOUND	MALE	CARDIO	Y= 9.17 - .19*X	1.90	26.82	3.96	3.34	1.50
ALL	LOW	EVENT	MALE	HYPER	Y= 327E-6 + .00*X	0.00	4.16	0.02	7.08	0.05
ALL	LOW	EVENT	FEMALE	HYPER	Y= .01 + .00*X	.00	4.16	0.90	7.08	0.03
ALL	LOW	EVENT	BOTH	HYPER	Y= .01 + .00*X	.00	4.15	0.02	7.67	0.03
FIGHTER	LOW	EVENT	MALE	HYPER	Y= .01 + .01*X	0.01	1.67	0.02	3.82	0.05
FIGHTER	LOW	EVENT	BOTH	HYPER	Y= .02 + .00*X	0.00	0.66	0.02	3.52	0.34
SR71	LOW	SOUND	FEMALE	HYPER	Y= .08 + .00*X	.00	26.00	0.01	3.34	0.02
ALL	LOW	SOUND	FEMALE	CANCER	Y= 3.47 + .08*X	0.36	26.38	1.26	3.40	0.65
ALL	LOW	SOUND	BOTH	CANCER	Y= 3.67 - .08*X	0.33	26.36	1.56	3.41	0.62
SR71	LOW	SOUND	MALE	CANCER	Y= 4.37 - .09*X	0.52	26.82	1.84	3.34	0.77
SR71	LOW	SOUND	FEMALE	CANCER	Y= 3.20 - .07*X	0.34	26.82	1.22	3.34	0.62
SR71		SOUND	BOTH	CANCER	Y= 3.34 - .08*X	0.28	26.82	1.51	3.33	0.58
ALL	LOW	SOUND	MALE	CVA	Y= 2.35 - .06*X	0.20	26.36	0.72	3.41	0.49
FIGHTER	LOW	SOUND	MALE	CVA	Y= .67 + .02*X	0.24	6.82	0.81	6.67	0.51
FIGHTER	LOW	PRESSURE	FEMALE	CVA	Y= .41 + .27*X	0.21	0.88	0.63	0.78	0.41
FIGHTER	LOW	CARPET	FEMALE	CVA	Y= .43 + .01*X	0.22	31.71	0.63	27	0.5
FIGHTER	LOW	SOUND	FEMALE	CVA	Y= .48 + .02*X	0.23	6.82	0.63	6.67	0.5
FIGHTER	LOW	PRESSURE	BOTH	CVA	Y= .55 + .18*X	0.08	0.83	0.7	0.78	0.31
FIGHTER	LOW	CARPET	BOTH	CVA	Y= .55 + .00*X	0.08	31.00	0.69	27.00	0.31
FIGHTER	LOW	SOUND	BOTH	CVA	Y= .59 + .02*X	0.08	6.32	0.70	6.67	0.31
SR71	LOW	EVENT	FEMALE	CVA	Y= .40 + .04*X	0.14	4.13	0.55	4.17	0.39
ALL	LOW	PRESSURE	MALE	OTHER	Y= 9.89 - 4.64*X	2.86	0.99	5.30	0.24	1.98
ALL	LOW	PRESSURE	FEMALE	OTHER	Y= 5.45 - 2.69*X	1.08	0.99	3.99	0.23	1.17
ALL	LOW	PRESSURE	BOTH	OTHER	Y= 7.47 - 3.44*X	1.55	0.98	4.06	0.24	1.66
SR71	LOW	PRESSURE	MALE	OTHER	Y= 9.66 - 4.79*X	2.74	0.93	5.23	0.21	1.92
SR71	LOW	CARPET	MALE	OTHER	Y= -.19 + .00*X	2.81	3278.40	5.23	594.74	1.92
SR71	LOW	PRESSURE	FEMALE	OTHER	Y= 5.06 + 2.32*X	1.08	0.93	2.30	0.21	1.13
SR71	LOW	CARPET	FEMALE	OTHER	Y= .38 + 4774E-6*X	1.11	3278.40	2.92	594.74	1.12
SR71	LOW	PRESSURE	BOTH	OTHER	Y= 7.24 - 3.40*X	1.57	0.92	4.01	0.21	3.43
SR71	LOW	CARPET	BOTH	OTHER	Y= .13 = .00*X	1.62	3278.10	4.01	594.74	1.43

APPENDIX 5

TABLE 6

REGRESSION EQUATIONS AND RESIDUAL MEAN SQUARES FOR STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN CAUSE-SPECIFIC PERCENT MORBIDITY AND SONIC-BOOM PARAMETERS WITHIN AIRCRAFT TYPE AND RISK AREA (TABLE 32)

AIRCRAFT TYPE			TOWNSHIP RISK				EXPOSURE LEVEL				SEX			CAUSE OF DEATH					REGRESSION LINE	RESIDUAL MEAN SQ.	MEAN (X)	MEAN (Y)	S.D. (X)	S.D. (Y)
ALL	FIGHTER	SR71	ALL	HIGH	LOW	MEDIUM	EVENT	CARPET	PRESSURE	SOUND	MALE	FEMALE	BOTH	CANCER	RTPER	CARDIO	CVA	OTHER						
/			/							/						/			Y= .27 + .00 *X	0.01	37.67	0.39	7.44	0.10
	/			/				/								/			Y= .84 + 239E-6*X	.00	46.40	0.52	38.00	0.03
	/			/						/						/			Y= .84 + 434E-6*X	.00	21.42	0.05	22.18	0.03
		/		/				/								/			Y= .01 + 139E-7*X	.00	3084.10	0.05	689.44	0.03
/					/		/									/			Y= .07 + 848E-6*X	0.01	65.00	0.05	23.00	0.05
		/			/		/									/			Y= .06 - 844E-6*X	0.00	15.00	0.05	23.18	0.05
		/	/					/						/					Y= .40 - 720E-7*X	0.02	3193.60	0.17	610.44	0.17
		/		/	/		/							/					Y= .23 - .00*X	0.02	16.80	16.60	16.13	0.17
		/		/					/					/					Y= .06 + .22*X	0.03	1.00	0.07	0.26	0.17
		/		/				/						/					Y= .49 - 104E-6*X	-0.023	3084.10	0.166	689.44	0.17
		/		/				/									/		Y= .07 + 516E-6*X	0.00	16.07	0.08	19.62	0.03
/					/		/										/		Y= .06 + 644E-6*X	0.00	15.00	0.07	23.12	0.04
		/			/		/										/		Y= .06 + 638 E -6*X	0.00	15.00	0.07	23.18	0.04
/								/										/	Y= .37 - .05*X	0.00	1.33	0.30	0.62	0.09
		/						/										/	Y= .42 - .12*X	0.00	0.97	0.30	0.23	0.95
		/	/					/						/				/	Y= .12 + 558E-7*X	0.01	3193.60	0.30	610.44	0.09
/				/					/									/	Y= .35 - .05*X	0.01	1.38	0.28	0.74	0.08
		/		/				/										/	Y= .24 + 1.01*X	0.00	16.33	0.20	16.18	0.09
	/			/				/										/	Y= .4170 - .14*X	0.01	1.00	0.28	0.26	0.09

APPENDIX 6

APPENDIX 6, TABLE 1

SMOKING HABIT AND ALCOHOL USE

Cigarette Smoking

	Number	%
Smoking Habit:		
Never Smoke	11	37.90
Current Smoker	15	51.70
Ex-Smoker	3	10.30

	Mean	S.D.
For Smoker (N=18):		
Age Started:	16.36	2.71
Total Years:	21.12	12.26
Average Packs:	1.53	0.72

Alcohol Use

	Mean	S.D.
Age Started (N=26):	18.48	2.46

	Number	%
Frequency of Drink:		
1 a day	2	7.70
Nearly Everyday	1	3.80
3-4 times a week	1	3.80
1-2 times a week	12	46.20
2-3 times a month	3	11.50
1 time a month	3	11.50
less than 1 a month, but at least 1 a year	4	15.40

	Number	%
No. of Drinks per Occasion:		
11 Drinks or More	1	3.80
7-8 Drinks	1	3.80
5-6 Drinks	6	23.10
3-4 Drinks	6	23.10
1-2 Drinks	12	46.20

APPENDIX 6, TABLE 2

FAMILY HISTORY AND MEDICAL HISTORY

	Yes		No		Unknown	
	Number	%	Number	%	Number	%
Family History:						
Angina	1	3.4	28	96.6	0	0.0
Diabetes	6	20.7	23	79.3	0	0.0
Heart Disease	6	20.7	23	79.3	0	0.0
Kidney Disease	2	6.9	27	93.1	0	0.0
Hypertension	5	17.2	24	82.8	0	0.0
Sleep Disorder	2	6.9	27	93.1	0	0.0
Migraine Headaches	8	27.6	21	72.4	0	0.0
Emotional Problem	3	10.3	26	89.7	0	0.0
Stomach Ulcer	7	24.1	22	75.9	0	0.0
Noise Induced Hearing Loss	4	13.8	25	86.2	21	72.4
Other Diseases	3	10.3	5	17.2	0	0.0
Medical History:						
Seeing Doctor Regularly	12	41.4	17	58.6	0	0.0
Considered in Good Health	27	93.1	2	6.9	0	0.0
Take Medication Regularly	6	20.7	22	75.9	1	3.4
Weight Changed by 10lbs During the Last Year	8	27.6	21	72.4	0	0.0
Followed Special Diet	8	27.6	20	69.0	1	3.4

APPENDIX 6, TABLE 3

DIET HISTORY

	Number	%
Weight Changes:		
Higher	5	62.5
Lower	3	37.5
Reason of Changes:		
Diet	3	37.5
Other	3	37.5
Unknown	2	25.0

Special Diets Followed:

	Number	Age Started: (Mean +/- S.D.)	Years Followed: (Mean +/- S.D.)
Low Salt	4	40.0 +/- 15.2	8.0 +/- 2.5
Low Protein	1	60.0 -	5.0 -
High Protein	2	51.0 +/- 12.7	7.5 +/- 3.5
Diabetic	1	50.0 -	15.0 -
Lowfat	2	51.0 +/- 12.7	7.5 +/- 3.5
Allergy	2	15.5 +/- 14.8	1.5 +/- 0.7

Number of cases were 8.

APPENDIX 6, TABLE 4

HEALTH PROBLEMS

	Yes		Age	No	
	Number	%	(Mean +/- S.D.)	Number	%
Allergies	8	27.60	18.62 +/- 13.35	21	72.40
Angina	1	3.40	42.00 +/- 0.00	28	96.60
Repeated Infection	2	7.10	16.00 +/- 0.00	26	92.90
Diabetes	1	3.40	50.00 +/- 0.00	28	96.60
Heart Disease	2	6.90	53.00 +/- 15.56	27	93.10
Chronic Bronchitis	3	10.30	18.67 +/- 12.10	26	89.70
Tuberculosis	0	0.00	- -	29	100.00
Pneumonia	4	13.80	28.75 +/- 26.87	25	86.20
Lung Cancer	0	0.00	0.00 +/- 0.00	29	100.00
Emphysema	0	0.00	- -	29	100.00
Fibrosis of the Lung	0	0.00	- -	29	100.00
Kidney Disease	0	0.00	- -	29	100.00
Hypertension	2	6.90	34.00 0.00	27	93.10
Sleep Disorder	1	3.40	unknown -	28	96.60
Asbestos Disease	0	0.00	- -	29	100.00
Migraine Headache	3	10.30	32.00 +/- 10.15	26	89.70
Emotional Problem	0	0.00	- -	29	100.00
Mesothelioma	0	0.00	- -	29	100.00
Silicosis	0	0.00	- -	29	100.00
Stomach Cancer	0	0.00	- -	29	100.00
Bronchial Asthma	3	10.30	29.33 +/- 11.15	26	89.70
Noise-Induced Hearing Loss	1	3.60	5.00 +/- 0.00	27	96.40
Cancer of the Colon	0	0.00	- -	29	100.00
Cancer of the Esophagus	0	0.00	- -	29	100.00
Cancer of the Bladder	0	0.00	- -	29	100.00
Other Cancer	1	3.40	unknown -	28	96.6
Other Disease Described	0	0.00	- -	29	100.00

APPENDIX 6, TABLE 5

EXPLOSURE HISTORY

	Yes		Length	No		Unknown	
	Number	%	(Mean +/- S.D.)	Number	%	Number	%
Avocational Exposure:							
Compressed Air	3	10.34	9.33 +/- 11.15	22	75.86	4	13.79
Engine Exhausts	7	24.14	19.40 +/- 21.17	19	65.52	3	10.34
Loud Noise	13	44.83	15.18 +/- 15.98	14	48.28	2	6.90
Paint, Solvents, Glues	10	34.48	20.86 +/- 17.10	17	58.62	2	6.90
Exposure at Work:							
Adhesive	15	51.72	12.73 +/- 9.07	14	48.28	0	0.00
Alcohol	10	34.48	9.71 +/- 6.87	19	65.52	0	0.00
Arsenic	1	3.45	7.00 +/- 0.00	28	96.55	0	0.00
Asbestos	7	24.14	12.00 +/- 20.31	22	75.86	0	0.00
Benzene	3	10.34	24.50 +/- 33.23	25	86.21	1	3.45
Beryllium	1	3.45	13.00 +/- 0.00	26	89.66	2	6.90
Cadmium	1	3.45	1.00 +/- 0.00	26	89.66	2	6.90
Carbon Disulfide	0	0.00	- -	27	93.10	2	6.90
Carbon Tetrachloride	8	27.59	5.71 +/- 6.65	20	68.97	1	3.45
Chromates	1	3.45	2.00 +/- 0.00	26	89.66	2	6.90
Chromic Acid Mist	0	0.00	- -	27	93.10	2	6.90
Fiberglass	8	27.59	8.00 +/- 8.25	21	72.41	0	0.00
Fluorides	6	20.69	24.20 +/- 17.68	21	72.41	2	6.90
Isocyanates	3	10.34	27.50 +/- 28.99	24	82.76	2	6.90
Lead	6	20.69	18.20 +/- 16.81	22	75.86	1	3.45
Metal Priming	6	20.69	8.60 +/- 5.77	22	75.86	1	3.45
Microwaves	9	31.03	7.62 +/- 3.96	19	65.52	1	3.45
Noise	20	68.97	10.69 +/- 8.32	9	31.03	0	0.00
Pesticides	8	27.59	7.75 +/- 6.90	21	72.41	0	0.00
Radioactive Material	12	41.38	10.33 +/- 9.87	16	55.17	1	3.45
Solvents/Degreasers	14	48.28	13.90 +/- 8.71	15	51.72	0	0.00
Sonic Booms	19	65.52	8.20 +/- 7.27	10	34.48	0	0.00
Spray Painting	15	51.72	12.70 +/- 6.65	14	48.28	0	0.00
Tricholorethylene	12	41.38	9.56 +/- 8.14	16	55.17	1	3.45
Vinyl Chloride	1	3.45	3.00 +/- 0.00	27	93.10	1	3.45
Welding/Soldering	17	58.62	15.75 +/- 10.64	12	41.38	0	0.00
Wood Dust	11	37.93	10.86 +/- 7.58	18	62.07	0	0.00
Insulation Material	8	27.59	7.80 +/- 6.98	21	72.41	0	0.00
Other Exposures	0	0.00		13	44.83	16	55.17

APPENDIX 6, TABLE 6

RESIDENTIAL EXPOSURE TO SONIC BOOM

	BY PERSON (N=21)		BY SITE (N=76)	
	Number	Percentage	Number	Percentage
Damage to Objects and Building:				
Yes	6	28.57	18	23.68
No	8	38.10	18	23.68
Don't Know	5	23.81	11	14.47
Unknown	2	9.52	29	38.16
Boom Per Year:				
>10	4	19.05	16	21.05
10+ - 100	11	52.38	31	40.79
100+ - 1000	3	14.29	16	21.05
1000+	1	4.76	2	2.63
Unknown	2	9.52	11	14.47
Degree of Concern:				
No Concern	4	19.05	5	6.57
Disturbing	6	28.57	10	13.16
Annoying	3	14.29	8	10.53
Highly Annoying	2	9.52	10	13.16
Unknown	6	28.57	43	56.58
Location:				
In Nevada	10	47.62	28	36.84
Out-of-State	9	42.86	46	60.53
Unknown	2	9.52	2	2.63

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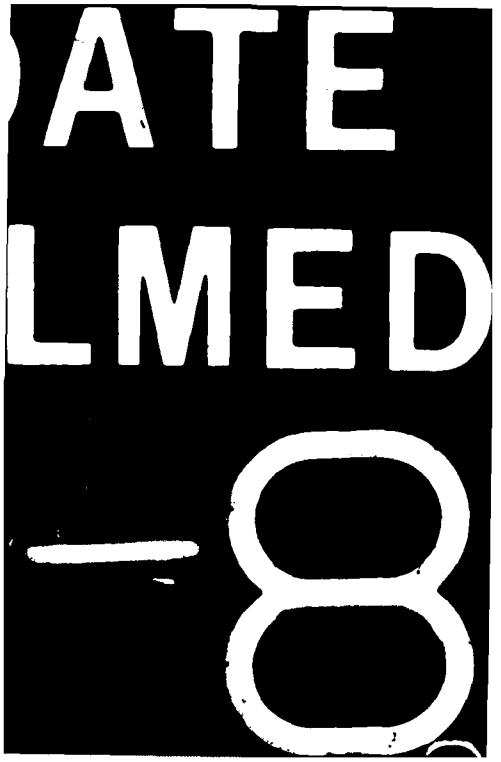
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